UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

NOV 02 2016

CERTIFIED MAIL 7009 1680 0000 7647 3422
RETURN RECEIPT REQUESTED

REPLY TO THE ATTENTION OF:

Ms. Margaret Pibuldhanapatana
Health, Safety, and Environmental Leader
Honeywell Burdick and Jackson
1953 South Harvey Street
Muskegon, Michigan 49442

Re: Notice of Violation
Compliance Evaluation Inspection
EPA ID Number: MID072575731

Dear Ms. Pibuldhanapatana:

On July 19, 2016, representatives of the U.S. Environmental Protection Agency and the Michigan Department of Environmental Quality inspected the Honeywell Burdick and Jackson ("HBJ") facility located in Muskegon, Michigan. As a large quantity generator of hazardous waste, HBJ is subject to the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq. (RCRA). The purpose of the inspection was to evaluate HBJ's compliance with certain provisions of RCRA and its implementing regulations related to the generation, treatment and storage of hazardous waste. A copy of the inspection report is enclosed for your reference.

Based on information provided by HBJ, on EPA's review of records pertaining to HBJ, and on the inspector's observations, EPA has determined that HBJ has unlawfully stored hazardous waste without a license or interim status as HBJ failed to comply with conditions for a license exemption under Mich. Admin. Code. r. 299.9306(1)-(3) [40 C.F.R. § 262.34(a)-(c)].

Many of the conditions for a RCRA license exemption are also independent requirements that apply to licensed and interim status hazardous waste management facilities that treat, store, or dispose of hazardous waste ("TSD requirements"). When a hazardous waste generator loses its license exemption due to a failure to comply with an exemption condition incorporated from Mich. Admin. Code. r. 299.9601(1)-(3) and 299.11003(1)(p) and (q), the generator: (a) becomes an operator of a hazardous waste storage facility; and (b) simultaneously violates the corresponding TSD requirement. The exemption conditions identified in the paragraphs below are also independent TSD requirements incorporated from Mich. Admin. Code. r. 299.9601(1)-(3) and 299.11003(1)(p) and (q). Accordingly, each failure of HBJ to comply with these conditions is also a violation of the corresponding requirement in in Mich. Admin. Code. r. 299.9601(1)-(3) and 299.11003(1)(p) and (q) [40 C.F.R. part 265] (if the facility should have fully complied with the requirements for interim status), or Mich. Admin. Code. r. 299.9601(1) and (2) and 299.11003(1)(m) – (o) [40 C.F.R. part 264] (should the facility have been licensed).

STORAGE OF HAZARDOUS WASTE WITHOUT A LICENSE / INTERIM STATUS AND VIOLATIONS OF TSD REQUIREMENTS

1. Hazardous waste Tank System Requirements – Subchapter J

   A large quantity generator, in accordance with Mich. Admin. Code r. 299.9306(1)(a)(ii) [40 C.F.R. § 262.34(a)(1)(ii)], must comply with the following requirements in 40 C.F.R. part 265, subpart J, among other things, for tank systems used to store hazardous waste:

   - Obtain a written assessment reviewed, and certified by a qualified professional engineer attesting that the tank system has sufficient structural integrity and is acceptable for storing and treating hazardous waste. See 40 C.F.R. § 265.192(a);

   - Use an independent, qualified installation inspector or a qualified Professional Engineer to inspect the new tank system or component in use for (1) weld breaks; (2) punctures; (3) scrapes of protective coating; (4) cracks; (5) corrosion; (6) and other structural damage or inadequate construction or installation. See 40 C.F.R. § 265.192(b)];

   - Test the new tanks and ancillary equipment (e.g., piping and pumps used to distribute hazardous waste from its point of generation to a storage or treatment tank) for tightness prior to being covered, enclosed, or placed in use. See 40 C.F.R § 265.192(d);

   - Ensure that ancillary equipment is supported and protected against physical damage and excessive stress due to settlement, vibration, expansion or contraction. See 40 C.F.R. § 265.192(e); and,

   - Obtain and keep on file at the facility written statements by those persons required to certify the design of the tank system and supervise the installation of the tank system in accordance with the requirements in 40 C.F.R. § 265.192(b) – (f). See 40 C.F.R. § 265.192(g).

   At the time of the inspection, a P.E.-certified assessment was available for review for hazardous waste tank T-16. An installation assessment for this tank was not available for review. Also, uncertified integrity assessments were available for the 25-gallon tanks in BR-1, 2, and 3. No integrity assessment was available for the 25-gallon tank located in the Now Pack station. None of the 25-gallon tanks had installation assessments.

2. Air Emission Standards for Tanks – Subpart CC

   In accordance with Mich. Admin. Code r. 299.9306(1)(a)(i); 40 C.F.R. part 265, subpart CC [40 C.F.R. §§ 262.34(a)(1)(ii); 265.1085(c)(1)], a large quantity generator who uses level 1 controls on a tank system to store hazardous waste with an average volatile organic concentration of at least 500 parts per million by weight, shall prepare and maintain a record of the maximum organic vapor pressure (MOVP) of the waste.

At the time of the inspection, a record of the MOVP of the hazardous waste managed in the waste tank system was not available for review.

3. Contingency Plan Requirements

A large quantity generator, in accordance with Mich. Admin. Code r. 299.9306(1)(d); 40 C.F.R. part 265, subpart D [40 C.F.R. §§ 262.34(a)(4) and 265.52(c)], must provide a description of the arrangements agreed to by local police departments, fire departments, hospitals, contractors and state and local emergency response teams to coordinate emergency services in a facility contingency plan:

At the time of the inspection, the facility contingency plan did not include a description of arrangements made with emergency responders.

4. Land Disposal Restriction Notice

A large quantity generator who determines that its generated waste does not meet treatment standards for disposal must provide to the treatment or storage facility receiving the waste a notice which includes, among other things, the applicable wastewater/nonwastewater category as described in 40 C.F.R. § 268.2(d) and (f). See Mich. Admin. Code r. 299.9306(1)(d); 40 C.F.R. part 268 [40 C.F.R. §§ 262.34(a)(4); 268.7(a)(2)].

At the time of the inspection, a land disposal restriction notice associated with manifest 015704512 (dated 4-25-16) indicated that a waste was classified as "wastewater" though it also noted the total organic carbon content was greater than 1%. A second land disposal restriction notice associated with manifest 014805687 (dated 1-15-16) indicated that three of four organic wastes were classified as "wastewater." No indication was made for the fourth waste.

Summary of license exemption requirements: By failing to comply with the conditions for a license exemption, above, HBJ became an operator of a hazardous waste storage facility, and was required to obtain a Michigan hazardous waste storage license. HBJ failed to apply for such a license. HBJ's failure to apply for and obtain a hazardous waste storage license violated the requirements of Mich. Admin. Code. r. 299.9502(1), 299.9508 and 299.9510 [40 C.F.R. §§ 270.1(c), and 270.10(a) and (d)]. Failure to comply with a license exemption condition incorporated from Mich. Admin. Code. r. 299.9601(1)-(3) and 299.11003(1)(p) and (q) is also an independent violation of the corresponding TSD requirement..

CONCLUSION

At this time, EPA is not requiring HBJ to apply for a Michigan hazardous waste storage license so long as it immediately establishes compliance with each of the requirements for a license exemption outlined in the paragraphs, above.

According to Section 3008(a) of RCRA, EPA may issue an order assessing a civil penalty for any past or current violation, requiring compliance immediately or within a specified time period, or both. Although this letter is not such an order or a request for information under Section 3007 of RCRA, 42 U.S.C. § 6927, we request that you submit a response in writing to us no later than 30 days after receipt of this letter documenting the actions, if any, which you have taken to establish compliance with all requirements listed above. You should submit your response to Brenda Whitney, U.S. EPA, Region 5, 77 West Jackson Boulevard, LR-8J, Chicago, Illinois 60604.

If you have any questions regarding this letter, please contact Ms. Whitney, of my staff, at 312-353-4796 or at whitney.brenda@epa.gov.

Sincerely,

Gary J. Victorine, Chief
RCRA Branch

Enclosure

cc: Wade O'Boyle, MDEQ (oboylew@michgan.gov)
Lonnie Lee, MDEQ (Leel@michigan.gov)
John Craig, MDEQ (craigj@michigan.gov)
Steven Sliver, MDEQ (slivers@michigan.gov)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604

Compliance Evaluation Inspection Report

Date of Inspection:	July 19, 2016
Facility Name:	Honeywell Burdick and Jackson
Facility Address:	1953 South Harvey Street Muskegon, Michigan 49442
EPA RCRA ID Number:	MID072575731
Generator Status:	Large Quantity Generator
Facility Contact:	Margaret Pibuldhanapatana Health, Safety, and Environmental Leader
U.S. EPA RCRA Inspector:	Brenda Whitney - Environmental Engineer Land and Chemicals Division Resource Conservation and Recovery Act (RCRA) Branch Compliance Section 2

Prepared By:

Brenda Whitney – Environmental Engineer — 8-31-16 Date

Approved By:

Julie Morris – Chief, Compliance Section 2 — 8/31/16 Date

Purpose of Inspection

I conducted an unannounced Compliance Evaluation Inspection (CEI or "Inspection") of the Honeywell Jackson and Burdick facility ("Honeywell" or "Facility") located in Muskegon, Michigan, on July 19, 2016. This CEI was an evaluation of Honeywell's compliance with the RCRA hazardous waste regulations codified in the Michigan Administrative Code and the Code of Federal Regulations. The Facility has notified as a large quantity generator of hazardous waste generating more than 1,000 kilograms of hazardous waste per month. Wade O'Boyle of the Michigan Department of Environmental Quality participated in this CEI.

Participants

Margaret Pibuldhanapatana	Health, Safety, and Environmental Manager	Honeywell
Robert Brenton	PMT Environmental COE Leader	Honeywell
John Hamann	Health, Safety, and Environmental Specialist	Honeywell
Wade O'Boyle	Hazardous Waste Quality Analyst	MDEQ
Brenda Whitney	Environmental Engineer	U.S. EPA

Introduction

Upon arrival at Honeywell at 10 a.m., EST, Wade and I signed in at the front desk and I presented my credentials. The front desk attendant provided us with visitor badges and contacted Ms. Pibuldhanapatana who escorted us to her office for an introductory meeting. Mr. Brenton joined us shortly thereafter. I delineated the purpose and logistics of the CEI to the Honeywell representatives and stated that I would be taking photographs during the CEI as needed. I was told that a monitor would be used to determine if the atmosphere in the plant was safe for camera use. I provided the following compliance assistance documents; *Michigan Retired Engineers Technical Assistance Program (RETAP)* sheet *(MDEQ brochure)*; *P2 Technical Assistance Contacts; and U.S. EPA Small Business Resources*. As we discussed Honeywell's manufacturing operations focusing on waste generation sources and management methods, we also discussed the procedures EPA uses for controlling confidential business information. We then departed on a walking tour of the facility. Mr. O'Boyle and I left the Facility after the tour and returned the following day at 8 a.m., EST, to review records. Upon completion of the CEI, I held a closing conference with Honeywell representatives.

Site Description

The following information about Honeywell is based on the personal observations of the EPA inspector and on representations made during the inspection by the Facility personnel identified above or within the text unless otherwise noted.

Facility Background Information:

- Honeywell Corporation purchased this Facility from Burdick and Jackson in 1959.
- The site is 19 acres in size.
- The Facility has 90,000ft^2 under roof.
- 75-90 employees are employed at this Facility and work 24 hours a day in three shifts, five days a week.

Process Information:

- Honeywell purifies technical-grade solvents into high-grade solvents for use in industry including the laboratory, pharmaceutical and biomedical sectors.
- The process includes filtration or adsorption, blending, and distillation.
- Honeywell runs ten distillation units, 22 receiver tanks, seven reactor vessels, two blend tanks and four 8-inch columns.
- All distillation units are under 10,000 gallons in size.
- There are five packaging and four bottling rooms.

Raw materials:

- Acids, bases and ignitable liquids.
- Raw materials are stored mainly in 17 tanks (T11-T15 and T17-T28). Intermediate product is stored in two tanks (T29 and T30).
- Finished products are packaged in 80 different types of containers.

Waste Generation and Management

- Vessel clean-outs generate the bulk of the hazardous waste.
- Batches that do not meet specification will also be discarded.
- Waste generated from the bottling rooms is collected in a day tank in or near that room. That tank is then emptied into a 55-gallon drum, which is moved to the hazardous waste staging area. The waste is vacuumed out of the drum and into the hazardous waste storage tank (T-16). The piping between the staging area and T-16 is welded.
- The following categories of materials are generated from the distillation process.
    - Still bottoms – the residuals that are left behind after distillation are managed as hazardous waste.
    - Overheads – the light materials pulled off of the top of the distillation process are collected and can be continued for use as a raw material without being pulled from the distillation unit. Overheads may be refluxed in the process as needed. The overheads vessel itself provides stabilized pressure for the system and is the injection point for the nitrogen blanket. This vessel is not managed as a hazardous waste tank for these reasons. Waste determinations are made when the material is pulled from the overheads vessel.
    - Forerun and residues ("FR") – intermediate products that are not managed as waste, but are to be either sold or to be further purified in-house.
- Incompatible waste that cannot be mixed in T-16 is kept in drums and shipped off-site.
- Technical grade acetone is used for cleaning of the vessels (100% before use). Batch procedures dictate the cleaning schedule.
- The Facility is plumbed to a sump and diversion pit. Honeywell has a permit with the Muskegon POTW. Before the pit is emptied to the POTW, the water is tested for pH and organics. Wastewater generated from the process lines includes non-contact cooling water from cooling jackets and wash down from reactors.
- Rags are generated from cleaning and are managed as hazardous waste. Rags are not laundered.
- Vacuum pump oil is managed as hazardous waste. The oil ring in the pump may become contaminated with organic vapors that escape from the distillation system. The efficiency of the pump is effected by the change in density of the oil due to the organics. The oil is changed out at that time.
- Universal waste lamps, batteries, and electronics are collected for recycling.
- Used oil may be generated through 3rd party maintenance, but it is not stored at this site.

Corrective Action

- Honeywell is in the process of coordinating with the State of Michigan in order to acquire an NFA. In order for the State to sign off on the NFA, a deed restriction on the property has to be in place. Honeywell stated that no new solid waste management units have been identified on the property.

Site Tour

Bottling Room 1 (BR-1): Line flush and spills from this bottling line collects in a 25-gallon tank underneath the counter (See Appendix A: Photographs 1 and 2). Two incoming lines from the funnel area and from the scale combine into one line that feeds the tank. A second line vents to the atmosphere. A third line is an emergency rupture line, and the fourth line is a drain line from which the tank is pumped out into a 55-gallon drum in the adjoining room. A red ID tag for their LDAR inspections was on the valves. The tank was labeled as "Hazardous Waste." The profile number for the waste was used instead of the waste numbers. The long list of waste numbers is applied to the label prior to shipment of the waste. An example of a finished label was provided after the inspection.

Bottling Room 2 (BR-2): The same system was set up for BR-2 as in BR-1 except this tank was located in Production Room 3 adjacent to BR-2. The piping was the same. Red ID tags for their LDAR program were in place. The tank was labeled as "Hazardous Waste" and the profile number was used in lieu of the waste numbers. This tank was marked with a start date of accumulation from 5-11-16.

Production Room 3 (PR-3): A 55-gallon "WCD" drum of waste in this area near distillation unit ("Still") 8 was marked as "Hazardous Waste." The profile number was on the drum. This container was to be pumped out into T-16. This drum was not marked with a start date of accumulation. While in this PR-3, Mr. Brenton pointed out the overheads vessel for the still and explained how it was part of the unit itself and served as an integral component in the production process. Near this still was a 3-gallon bucket that was labeled as "Hazardous Waste" and closed.

Production Room 2 (PR-2): A 55-gallon drum in this room was labeled as "Hazardous Waste" with the profile number and served to collect waste from Still 7 which was in this room.

Production Room 1 (PR-1): A 55-gallon drum in this room was labeled as "Hazardous Waste" with the profile number and was used to collect wastes from Stills 10, 11, and 5 which were all in this area.

Vacuum Pump: In a room outside of PR-1, I observed the vacuum pump. A 55-gallon drum is stationed by the pump for the waste oil. The drum was labeled as "Hazardous Waste" and marked with the profile number.

Contractor Paint Room: This storage room was positioned across from the vacuum pump room. This room contained contractor raw materials. No hazardous waste was observed.

Hazardous Waste Storage Area: The drum storage area is segregated between acidic wastes and basic wastes (See Appendix A: Photograph 3). Containers are lined up with aisle space on a concrete pad that is designed to collect spills. The pad appeared to be in good condition. The containers were marked as "Hazardous Waste" as applicable and marked with start dates of accumulation. Two drums were observed with start dates of 5/3/2016. These drums were noted as being due for removal from the site on the inspection sheets and on the white board in the storage areas.

Hazardous Waste Tank T-16: This 10,000-gallon tank is located in an outdoor tank farm. The secondary containment was segregated from the raw material tanks. The concrete appeared in good condition. The tank was also in good condition and was labeled as "Hazardous Waste." The piping leading to the tank as well as the equipment at the top of the tank appeared in good condition (See Appendix A: Photographs 4 and 5). The Subpart BB tags for the equipment associated with this tank appeared to be in the proper places. Only one valve is on the pipe leading to the tank because the line is welded. The other tags were placed on the vent line and the pump. I observed the tanker truck lines which remove the waste from this tank. What appeared to be a stray open-ended line from this tanker pipe was a release line for the nitrogen that is used to push any waste remaining in the tanker feed line back into T16 after the tanker is full. Only excess nitrogen is released through this line (See Appendix A: Photograph 6).

Process Water Sump and Diversion Pit: The sump holds approximately 10,000 gallons of water. This cylindrical sump empties into the rectangular diversion pit (24,000 gallons) after the water is tested for certain parameters. The diversion pit is pumped out to the POTW regularly.

Tanker Pads and control buildings: No hazardous waste was observed in these areas.

Warehouses and Pallet Shed: We walked through each warehouse (areas 17-24) on the property. No waste was observed in any of the warehouses with the exception of the universal waste rack just north of area 17. Each container of universal waste was closed and labeled as "Universal Waste" with the corresponding waste type. The last shipment date noted in this area was within one year of the inspection (3/30/16).

Maintenance shed: This pole barn on the northwest side of the property contained maintenance materials and equipment only. This building is not included on the site map. No hazardous waste was observed in this building.

Bladder Bag Emptying Station: This area is where bladder bags, which are plastic inserts in a particular container are removed. The waste in these bags drains into a tank beneath the counter. This tank was not observed during the inspection. A 55-gallon drum in the area was observed. This drum was marked as "Hazardous Waste" and with the profile number. A start date was not observed. I understood this drum to be used as a consolidation container for the wastes that accumulate in the tank under the counter.

Production Room 5 (PR 5): One 55-gallon drum of waste generated in this area was labeled as "Hazardous Waste" and marked with the profile number. Two 3-gallon containers were by the metering station in PR 5. These containers were labeled as "Hazardous Waste" and were closed. They were also marked with profile numbers. One additional 55-gallon drum in the area was reserved for chlorinated solvents only. This drum was marked as "Hazardous Waste" and with the profile number.

Production Room 4 (PR 4): Still 12 is in this area. Pot additives are added mostly in this unit. One 55-gallon drum was labeled with the words "Hazardous Waste" and profile numbers and one 3-gallon bucket was also labeled as such.

HPB 2: This is blending room that is not classified as a production room. I observed two 55-gallon drums of waste next to one another that collect wastes which are generated from one blending unit at different times (See Appendix A: Photograph 7). One drum is for an acidic waste stream. The second drum is for a basic waste stream. The physical point of generation is the same for both containers. According to Mr. Brenton, the temporal point of generation is different, as the waste is generated from alternating basic and acidic batches. Honeywell manages both of these containers as satellites. Both drums were labeled as "Hazardous Waste" and marked with profile numbers.

HPB 1: This is another blending room that is not classified as a production room. I observed one 55-gallon drum of "Hazardous Waste" marked with a profile number, and a second drum from a different process collecting waste from a knock-out pot that was similarly marked.

Bottling Room 3 (BR-3): The waste tank under the counter was labeled as "Hazardous Waste" and marked with the profile number and a start date of 7-18-16. The valves were tagged with subpart BB identification tags. A 55-gallon drum in this area for the line flush was labeled as "Hazardous Waste" and marked with the profile number.

Bottling Room 4 (BR-4): Technical and Electrical grade solvents are bottled in this room. I was unable to enter this room because it was in production. I did observe from the window that a 5-gallon bucket in the room was marked with the words "Hazardous Waste."

Instrument Lab: Waste is collected from the instruments in a one quart container (solids) or one gallon container (liquids). Each gallon container was closed with an "EcoFunnel" or with a lid (solids). Each container was labeled as "Hazardous Waste" (See Appendix A: Photograph 8).

Wet Lab: One 90-day 55-gallon drum was in this laboratory. This drum was labeled as "Hazardous Waste" and marked with a 7-11-16 start date of accumulation and profile number. The waste that gets place in this drum is generated in both the wet lab and the instrument lab. A collect of bottles of waste was on the lab bench next to the drum (See Appendix A: Photograph 9). According to Mr. Brenton, the sample bottles of product could still be used somehow or resampled before it is dumped in the drum. He said that material is tracked up until the moment it is dumped.

Trace Lab: More sensitive instrumentation is kept in this lab. Similar to the instrument lab, quart-sized and gallon-sized drums are used to collect waste. Each container was closed, labeled as "Hazardous Waste" and marked with a profile number.

End of Tour.

Records and Emergency Preparedness Review

Preparedness and Prevention: The Facility is equipped with internal communications and alarm systems. Phones are available for external communications to summon emergency assistance. In addition to a plant-wide fire suppression system that consists of water or water-based foams, portable fire extinguishers and spill control equipment are located

throughout the Facility and near the 90-day hazardous waste storage area. Emergency equipment is tested and maintained according to a schedule. Arrangements with local emergency response authorities have been made.

Contingency Plan:

- The list of emergency coordinators was current and included requisite information.
- The plan includes emergency evacuation information.
- The emergency equipment lists included descriptions, capabilities, and locations.
- A list of contact information for local emergency responders, but does not include a description of arrangements made with those responders.
- The plan has been submitted to emergency responders.

Training: A generic hazardous waste management training is provided to employees are in the health, safety and environmental department sign manifests, act as emergency coordinators and conduct weekly inspections. Operators are trained in a more hands-on training that is specific to the hazards expected at this facility. This training is provided through an outside contractor. The training was last provided in September, 2015.

Manifests: Three years of hazardous waste manifests were available for review. Land disposal restriction (LDR) forms were also available for review. Of note, the LDR form for manifest 015704512 (dated 4/25/16) indicated that a waste was classified as a wastewater with total organic carbon greater than 1%. A second LDR associated with manifest 014805687 (1/15/16) marked wastewaters for three of four organic wastes. No indication was made for the fourth waste.

Inspections: Inspections of hazardous waste storage areas (drum storage pad, universal waste area, and the 25-gallon tanks in bottling rooms) are conducted five days a week for containers and 7 days a week for T-16. Weekly inspections are conducted for satellite accumulation containers in the five production rooms, HPB rooms, and labs. The 90-day drum in the wet lab is also on a weekly schedule.

Waste Determinations: Waste profiles were available for review. Most waste determinations are made using generator knowledge because the wastes are generated according to batch recipes thereby limiting variability and unknowns in any typical waste stream.

Tank Requirements: T-16 was installed in 1993 and required an integrity assessment and separate installation assessment. A P.E.-certified tank assessment which discussed the design standards and hazardous characteristic compatibilities for T-16 was available for review. An installation assessment for this tank was not on file. Secondary containment for this tank appeared to be in good condition and was deemed to be adequate in size in the assessment. Integrity assessments that were not certified by a P.E. were available for the 25-gallon tanks in BR-1, 2, and 3. No records were available for the tank associated with the bladder bag emptying station (Now Pack). Installation assessments were not available for review for any of the four 25-gallon tanks. The tanks which I observed were in stainless steel troughs for containment which appeared to be in good condition. No leaks were observed.

Air Emissions Requirements: Honeywell is subject to Subparts BB and CC of 40 CFR 265. Even though Honeywell has distillation units, these units do not manage hazardous waste and therefore, Subpart AA does not apply. The Facility conducts LDAR monitoring quarterly and have not changed to an alternate schedule for any component. The associate who conducts the monitoring uses a TVA-1000. Calibration forms are included in the records. The LDAR checklist identifies pressure relief devices as flanges. No leaks have been identified. Annual inspections are conducted in accordance with Subpart CC, however, a maximum organic vapor pressure (MOVP) calculation was not available for review

Closing Conference

The following items were discussed with Honeywell personnel at the close of the inspection:

- Confidential Business Information (CBI) – It was determined that I did not collect information or photographs that were to be managed as CBI.
- Forerun and residue (F&R clarification)
- Tank assessments
- LDR requirements
- Overheads clarification
- HBR storage containers status
- Wet lab container storage status
- Use of profile numbers on labels instead of waste numbers

List of Appendices

- Appendix A: Photograph Log
- Appendix B: Checklists
- Appendix C: Documents Received from Facility During Inspection

Appendix A

Photograph Log

Inspection Date:
July 19-20, 2016

Facility Name and ID Number:
Honeywell Burdick & Jackson
EPA ID: MID072575731

Inspector and Photographer:
Brenda Whitney
Compliance Section 2
RCRA Branch
Land and Chemicals Division

Camera Used:
Olympus Stylus 600
Serial Number: A47525904

Photograph 1

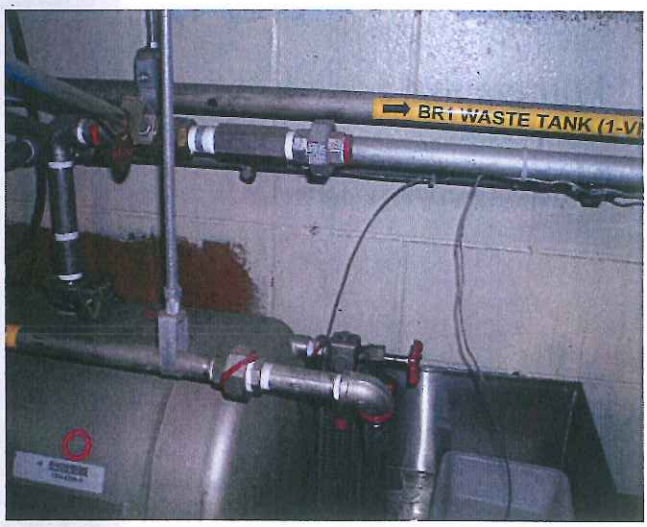
Taken at 11:19 a.m. CT

The hazardous waste tank in BR-1 is approximately 25-gallons in size, was labeled as "Hazardous Waste," marked with a start date of 7-7-16 and tagged for LDAR inspections.

Photograph 2

Taken at 11:20 a.m. CT

See description under Photograph 1.



Photograph 3

Taken at 12:25 p.m. CT

The hazardous waste storage area for containers was segregated between basic and acidic wastes. The concrete floor of the area provided containment for the containers and was marked for aisle space. The labels for each of the containers in the area were visible for inspection.

Photograph 4

Taken at 12:28 p.m. CT

The overhead piping leading to T16 is welded and is inspected every day as part of the T-16 inspection.

Photograph 5

Taken at 12:34 p.m. CT

Tank 16 was marked as "Hazardous Waste." The equipment associated with the tank was in good condition. LDAR tags identifying equipment subject to Subpart BB appeared to be in appropriate places (valves, pumps, and pressure relief devices (on the flange)).

Photograph 6

Taken at 12:45 p.m. CT

This pipe system is used for loading tanker trucks with waste from T-16. The pipe identified in the blue oval (added for emphasis) is an open-ended pipe on the line that is used for purging excess nitrogen gas from the line after the tanker has filled.

Photograph 7

Taken at 1:50 p.m. CT

Two 55-gallon drums in HBR 2 were co-located and were being managed as satellite accumulation containers. The drums collect waste from the same piece of equipment but at different times. One waste held basic waste, the other held acidic waste.

Photograph 8

Taken at 2:11 p.m. CT

Containers in the laboratory were each labeled and closed. The funnel in this photograph allows for a line to dispense waste into the container at any times without having to open the container.

Photograph 9

Taken at 2:19 p.m. CT

Bottles were being staged for dumping into a 55-gallon drum in the wet laboratory. These bottles were closed and labeled but were collected from the instrument and wet labs. Mr. Brenton stated that these materials may still be used or resampled before being discarded.

Appendix B

Checklists

Inspection Date:
July 19-20, 2016

Facility Name and ID Number:
Honeywell Burdick & Jackson
EPA ID: MID072575731

Inspector:
Brenda Whitney
Compliance Section 2
RCRA Branch
Land and Chemicals Division

Department of Environmental Quality
FULLY REGULATED GENERATOR (FRG) INSPECTION FORM

Facility's Name Honeywell/Bendix and Jackson Part 3 Rules

Date 7/19/16 ID# MI0072575731 1994 PA 451

HAZARDOUS WASTE AND WASTE #	SOURCE	HOW MUCH

___ abbreviated

FACILITY COMPLIANCE REQUIRED IN ALL AREAS

WASTE DETERMINATION (Rule 302: 40 CFR 262.11

(NI = Not inspected; N/A = Not applicable)

		YES	NO	
1. Determined if waste streams are hazardous waste? (Rule 302: 40 CFR 262.11))	262A	X		NI N/A
a) copy of waste evaluation on-site 3 years? (Rule 307(1): 40 CFR 262.40(c))	262D	X		NI N/A
b) re-evaluated waste when changes in materials or process? (Rule 302(3))	262A			NI N/A
2. Did generator have written waste analysis plan if treating wastes on-site? (Rule 306)(1)(d):40 CFR 268.7(a)(5))	262C			NI N/A

IDENTIFICATION NUMBER (Rule 303: 40 CFR 262.12)

3. Has the generator obtained an identification number? (Rule 303: 40 CFR 262.12)	262A	X		NI N/A

MANIFEST REQUIREMENTS (Rule 304: 40 CFR 262.20)

4. Copies of the manifest readily available for review & inspection? (Section 11138(1)(f))	FSS	X		NI N/A
5. Manifests kept for the past 3 years? (Rule 307(3): 40 CFR 262.20(a))	262D	X		NI N/A
6. Manifests, prepared by the generator according to instructions in appendix of Part 262 contain the following:				
a) manifest document number (Rule 304(1)(b): 40 CFR 262.20(a)(i)),	262B	X		NI N/A
b) generator's name, address, phone & ID # (Rule 304(1)(b): 40 CFR 262.20(a)(i)),	262B	X		NI N/A
c) name & ID # of the transporter. (Rule 304(1)(b): 40 CFR 262.20(a)(i)),	262B	X		NI N/A
d) name, address & ID # of TSDF. (Rule 304(1)(b): 40 CFR 262.20(a)(i)),	262B	X		NI N/A
e) DOT description of waste(s). (Rule 304(1)(b): 40 CFR 262.20(a)(i)),	262B	X		NI N/A
f) quantity of waste, type & # of containers. (Rule 304(1)(b): 40 CFR 262.20(a)(i)),	262B	X		NI N/A
g) hazardous waste number of the wastes. (Rule 304(1)(b): 40 CFR 262.20(a)(i)),	262B	X		NI N/A
h) generator signature, initial transporter & date of acceptance. (Rule 304(1)(b): 40 CFR 262.20(a)(i)),	262B	X		NI N/A
7. NOT APPLICABLE				
8. For out-of-state manifests, if not submitted by designated facility, generator submitted copy of 3rd signature manifest as requested by Director? (Rule 304(2)(c))	262B			NI N/A
9. Is the transporter used properly registered &/or permitted under Act 138, Sec. 2 (3)? (Rule 304(1)(c))	262B	X		NI N/A

NOTE: For shipments of hazardous waste solely by water or rail shipments, within United States see Rule 304(4)(g or h).

10. Using manifest that has expired? (Rule 304(1)(a) : 40 CFR 262.20)	262B		X	NI N/A
11. Reportable exceptions (Rule 308(3): 40 CFR 262.42)(a).				N/A
a) number of manifests generator HASN'T receive signed copy from TSD w/in 35 days:				
b) number of manifests generator HASN'T submitted exception reports to RA & DEQ after 45 days:				
12. Facility has written program to reduce volume/toxicity/recycle wastes? (Rule 304(1)(b):40 CFR 262.27(a))	262B	X		NI N/A
OR				
13. Facility discusses program in place to reduce volume/toxicity/recycle of waste (Rule 304(1)(b): 40 CFR 262.27(a))	262B			NI N/A

LAND DISPOSAL RESTRICTION REQUIREMENTS
WASTE ANALYSIS AND RECORDKEEPING (Rule 311(1): 40 CFR 268.7))

		YES	NO	
14. Did the generator determine if the waste is restricted from land disposal? (Rule 311(1): 40 CFR 268.7(a)(1))				
a) all listed waste	268A	X		NI N/A
b) all characteristic wastes?	268A	X		NI N/A

NOTE: If waste has both listed & characteristic waste codes, the treatment standard for the listed waste is sufficient if the treatment standards for the listed waste includes a standard for the constituent that caused the waste to exhibit the characteristic, except for D001 and D002. (40 CFR 268.9(b))

15. If restricted waste exceeds treatment standards or prohibitions did notice go w/ initial shipment? (Rule 311(1):40 CFR 268.7(a)(2))	268A	X		NI N/A
OR				
16. If restricted waste does not exceed treatment standards or prohibitions did a notice and certification statement go with initial shipment? (Rule 311(1): (40 CFR 268.7(a)(3))	268A			NI N/A
OR				
17. If waste has exemption from prohibition on the type of land disposal method utilized for the waste, did a notice go with initial shipment? (Rule 311(1): 40 CFR 268.7(a)(4))	268A			NI N/A
OR				
18. If facility choose alternative treatment standard for lab pack that contains none of the waste in appendix IV, did a notice & certification go with initial shipment? (Rule 311(1): 40 CFR 268.7(a)(9))	268A			NI N/A
19. Did the notice include: (Rule 311(1): 40 CFR 268.7(a)(1) or 268.7(a)(2) or 268.7(a)(3)				
a) EPA hazardous waste #?	268A	X		NI N/A
b) if wastewater or non-wastewater as defined in 268.2(d&f)?	268A		X	NI N/A
c) subcategory of the waste (such as D003 reactive cyanide) if applicable?	268A	X		NI N/A
d) manifest number associated with the shipment?	268A	X		NI N/A
e) waste analysis data, where available? Gen Knowledge	268A			NI N/A
f) waste constituents that the treater will monitor, if monitoring will not include all regulated constituents, for F001- F005, F039, D001, D002, D012-D043? (treatment standards for hazardous waste in table in 268.40 for the waste code under regulated constituents)	268A	X		NI N/A
UNLESS				
g) did generator/treater claim they are going to monitor for ALL regulated constituents in the waste in lieu of the generator indicating same in the notice? (Rule 311(1): 40 CFR 268.7(a)(1) & 268.9)	268A			NI N/A
h) did generator/treater claim they are going to monitor for underlying hazardous waste constituents (except vanadium and zinc), reasonably expected to be present at the generation point, above UTS standards for D001, D002 & TCLP organics? Rule 311(1): 40 CFR 268 Subpart D & 268.48)	268A	X		NI N/A
20. Other than notices for waste exceeding treatment standards, did notices include: (Rule 311(1): 40 CFR 268.7(2)(3)				
a) if the notice is for shipments that meet the standards does the notice include the certification?	268A			NI N/A
b) if the notice is for shipments under prohibitions does the notice include a statement that the waste isn't prohibited from land disposal & date the waste is subject to prohibition?	268A			NI N/A

NOTE: An alternate treatment standard may be used after approval from the Administrator. (40 CFR 268.44)
NOTE: Hazardous waste debris see 40 CFR 268.7(a)(1)(iv) for the notice requirements which must be followed by the statement "This hazardous debris is subject to alternative treatment standards of 40 CFR 268.45."

21. Generator retain on-site records to support determination from knowledge or results from tests? (40 CFR 268.7(a)(6)	268A	X		NI N/A
22. If the restricted waste is excluded from being a hazardous waste or solid waste did the generator place a one- time notice stating same in the facility file? (40 CFR268.7(a)(7))	268A			NI N/A
23. All notices/certifications/demonstrations/other documents retained for 3 years on-site? (40 CFR 268.7(a)(8)	268A	X		NI N/A

NOTE: This requirement (268.7(a)(8)) applies to solid waste even when the hazardous waste characteristic is removed prior to disposal or when the waste is excluded from the definition of hazardous waste or solid waste.

DILUTION PROHIBITED AS SUBSTITUTE FOR TREATMENT (RULE 311(1):40 CFR 268.3)

24. Generator dilute hazardous waste or treatment residue of a hazardous waste to avoid prohibition? (40 CFR: 268.3(a))	268A		X	NI N/A

TREATMENT STANDARDS (RULE 311(1):40 CFR 268.40)

25. If wastes exceeding treatment standards are mixed, was the most stringent standards selected? (40 CFR268.40(c))	268A			NI N/A

BIENNIAL REPORT (Rule 308: 40 CFR 262.41)

26. Generator submitted biennial report by 3/1 (even years)? (Rule 308(1): 40 CFR 262.41)	262D	X		NI N/A
27. Were copies of the report retained at least 3 years? (Rule 307(4): 40 CFR 262.40(b))	262D	X		NI N/A

PRE-TRANSPORTER REQUIREMENTS (Rule 305: 40 CFR 262.30)

Item	Rule	YES / NO
28. Waste packaged according to DOT regulations (required before shipping waste off-site)? (Rule 305(1)(a):40 CFR262.30))	262C	co.said [X] obsrvd ___ NI N/A
29. Are waste packages marked & labeled per DOT 49 CFR172 concerning hazardous materials (required before shipping waste off- site)?(Rule 305(1)(b)(c): 40 CFR 262.32(a))	262C	co.said [X] obsrvd ___ NI N/A
30. On containers of 119 gallons or less, is there a warning, generator's name, address, site identification number, manifest tracking number & waste code per DOT 49 CFR172.304? (Rule 305(1)(d): 40 CFR 262.32(b))	262C	co.said [X] obsrvd ___ NI N/A
31. If required (>1000 #'s), are placards available to the transporter? (Rule 305(1)(e): 40 CFR 262.33)	262C	[X] ___ NI N/A

ACCUMULATION TIME (Rule 306: 40 CFR 262.34)

Item	Rule	Response
32. If hazardous waste accumulated in containers: (If no, skip to #35)		
a) containers have accumulation date which is clearly visible? (Rule 306(1)(b): 40 CFR 262.34(a)(2))	262C	[X] ___ NI N/A
b) container have words "Hazardous Waste"? (Rule 306(1)(c): 40 CFR 262.34(a)(3))	262C	[X] ___ NI N/A
c) is each container clearly marked with the hazardous waste number? (Rule 306(1)(b)) Added at time of shipment	262C	[X] ___ NI N/A
d) has more than 90 days elapsed since date marked? (Rule 306(1)	262C	___ [X] NI N/A

OR

Item	Rule	Response
e) one of the following apply:		
i) the generator applied for & received an extension to accumulate longer? (Rule 306(3): 40 CFR 262.34(b))	262C	[ ] ___ NI (N/A)
ii) It is F006 waste recycled for metals recovery in compliance with Rule 306 (7) (180 days maximum). Rule 306(7):40 CFR 262.34(g))	262C	[ ] ___ NI (N/A)
iii) it is F006 waste recycled for metals recovery in compliance with Rule 306(7) which must be transported more than 200 miles (270 days max.)? (Rule 306(8):40 CFR 262.34(h)	262C	[ ] ___ NI (N/A)
iv) generator applied for & received extension or exception to accumulate F006 haz waste longer than ii or iii above? (Rule 306(9-10):40 CFR 262.34(i))	262C	[ ] ___ NI (N/A)

The following Subpart I, 265.170 to 265.177 requirements are referred to by Rule 306(1)(a) and 40 CFR 262.34(a)(1).

Item	Rule	Response
f) are containers in good condition? (265.171)	262C	[X] ___ NI N/A
g) are containers compatible with waste in them (265.172)	262C	[X] ___ NI N/A
h) are containers stored closed? (265.173(a))	262C	[X] ___ NI N/A
i) containers handled/stored in a way which may rupture it or cause leaks? (265.173(b)	262C	___ [X] NI N/A
j) ignitable & reactive wastes stored 15 meters (50 feet) from property line or written approval obtained from local fire prevention code authority for less than 15 meter? (265.176)	262C	[X] ___ NI N/A
k) are containers inspected weekly for leaks and defects? (265.174)	262C	[X] ___ NI N/A
l) did the generator document the inspections in 32(k)? (Rule 306(1)(a)(i))	262C	[X] ___ NI N/A
m) inspection documents maintained on-site 3 years? (Rule 306(1)(a)(i))	262C	[X] ___ NI N/A
n) are incompatible wastes stored in separate containers? (265.177(a))	262C	[X] ___ NI N/A
o) hazardous wastes put in unwashed containers that previously held incompatible waste. (265.177(b))	262C	___ [X] NI N/A
p) incompatible waste separated/protected from each other by physical barriers or sufficient distance? (265.177(c))	262C	[X] ___ NI N/A

Rule 306(2) & 40 CFR 262.34(c)(1) both refer to 40 CFR 265.171, 265.172 & 265.173(a).

Item	Rule	Response
33. If hazardous waste is being accumulated at the point of generation:		
a) container(s) <55 gal or 1 qt acutely/severely toxic? (Rule 306(2):40 CFR 262.34(c)(1))	262C	[X] ___ NI N/A
b) container(s) under operator control & near the point of generation? (Rule 306(2): 40 CFR 262.34(c)(1))	262C	[X] ___ NI N/A
c) container(s) have words "Hazardous Waste"? (Rule 306(2): 40 CFR 262.34(c)(1)(ii))	262C	[X] ___ NI N/A
d) are the container(s) marked with the hazardous waste number or chemical name? (Rule 306(2))	262C	[X] ___ NI N/A
e) are container(s) in good condition? (265.171)	262C	[X] ___ NI N/A
f) are container(s) compatible with waste in them? (265.172)	262C	[X] ___ NI N/A
g) container(s) closed when not in use & managed to prevent leaks? (265.173(a))	262C	[X] ___ NI N/A
34. If generator exceeds 55 gallons or 1 quart, w/in 3 days does generator, w/respect to that amount of excess waste:		company said
a) mark the container with the date the excess amount began accumulating? (Rule 306(2): 40 CFR 262.34(c)(2))	262C	[X] ___ NI N/A
b) move to an area with secondary containment, if required? (Rule 306(1): 40 CFR 264.175))	262C	[X] ___ NI N/A

Rule 306(1)(a) refers to containment requirements in 40 CFR 264.175.

Item	Rule	Response
35. If accumulating free liquids or any F020, F021, F022, F023, F026, F027, does the hazardous waste storage area include		
a) impervious base free of cracks? (264.175(b)(1)) :	262C	[X] ___ NI N/A

Item	Rule	Response
b) sloped or otherwise designed to elevate/protect containers from contact with liquids? (264.175(b)(2))	262C	[X] ___ NI N/A
c) hold 10% of volume of containers or volume of the largest container, whichever is greater? (264.175(b)(3))	262C	[X] ___ NI N/A
d) run-on prevented unless sufficient capacity? (264.175(b)(4))	262C	[X] ___ NI N/A
e) accumulated liquids removed in a timely manner to prevent overflow? (264.175(b)(5)) None	262C	[X] ___ NI N/A

NOTE: Closure of Accumulation Area covered under # 53.

Item	Rule	Response
36. If accumulating solids, (other than F020,F021,F022, F023, F026, F027), is haz waste accumulation area sloped or otherwise designed, or containers elevated or otherwise protected from contact with liquids? (264.175(c)(1 & 2))	262C	[X] ___ NI N/A
37. Is hazardous waste accumulated in other than tanks or containers? Or, is hazardous waste generated but not accumulated, i.e.: process tank? *Explain any yes answer.*		___ X NI N/A
38. Waste area protected from weather, fire, physical damage & vandals? (Rule 306(1)(e))	262C	[X] ___ NI N/A
39. Hazardous waste accumulated so no hazardous waste or hazardous waste constituent can escape by gravity into soil, directly or indirectly, into surface, ground-waters, drains or sewers, and such that fugitive emissions do not violate Act 451, Part 55? (Rule 306(1)(f))	262C	[X] ___ NI N/A
40. Is hazardous waste accumulated in tanks? *If so, complete Tank System inspection form.*		___ X NI N/A
41. Is hazardous waste placed on drip pads? *If so, complete Wood Preserving inspection form*		___ X NI N/A

Rule 306(1)(d) & 40 CFR 262.34(a)(4) refers to 265.16

PERSONNEL TRAINING (265.16)

Item	Rule	Response
42. Did personnel receive training? (265.16)	262C	[X] ___ NI N/A
43. Do personnel training records contain the following:		
a) job title? (265.16(d)(1))	262C	[X] ___ NI N/A
b) job descriptions? (265.16(d)(2))	262C	[X] ___ NI N/A
c) name of employee filling each job? (265.16(d)(1))	262C	[X] ___ NI N/A
d) description of type & amount of both introductory & continued training? 265.16(d)(3))	262C	[X] ___ NI N/A
e) training designed so facility personnel can respond to emergencies? (265.16(a)(3)	262C	[X] ___ NI N/A
f) records of training? (265.16(d)(4))	262C	[X] ___ NI N/A
g) do new personnel receive required training within 6 months? (265.16(b)	262C	[X] ___ NI N/A
h) do training records show personnel have taken part in annual training? (265.16(c))	262C	[X] ___ NI N/A
i) training by person trained in hazardous waste management procedures? (265.16(a))	262C	[X] ___ NI N/A

Rule 306(1)(d) & 40 CFR 262.34(a)(4) refer to 265, Subpart C, 265.30-265.37.

PREPAREDNESS AND PREVENTION (265.30-265.37)

Item	Rule	Response
44. Facility maintained/operated to minimize possibility of fire, explosion, release of hazardous waste or hazardous waste constituent which could threaten human health/environment? (265.31)	262C	co.said [X] obsrvd ___ NI N/A
45. If required, does this facility have the following:		
a) internal communications or alarm systems? (265.32(a))	262C	[X] ___ NI N/A
b) telephone or 2-way radios at the scene of operations? (265.32(b))	262C	[X] ___ NI N/A
c) portable fire extinguishers, fire control, spill control equipment and decontamination equipment? (265.32(c))	262C	[X] ___ NI N/A
d) adequate volume of water and/or foam available for fire control? (265.32(d))	262C	[X] ___ NI N/A
46. Testing and Maintenance of Emergency Equipment		
a) owner/operator test & maintain emergency equipment to assure operation? (265.33)	262C	[X] ___ NI N/A
b) has owner/operator provided immediate access to internal alarms? Access to alarm system is applicable only if required (40 CFR 265. 32)		
i) when hazardous waste is being poured, mixed, etc. (265.34(a))	262C	[X] ___ NI N/A
ii) if only one employee on the premises while facility is operating. (265.34(b))	262C	[ ] ___ NI (N/A)
c) aisle space for unobstructed movement of personnel/emergency equipment? (265.35)	262C	[X] ___ NI N/A
47. Has the facility made arrangements with local authorities? (265.37(a)&(b))	262C	[X] ___ NI N/A

Rule 306(1)(d) & 40 CFR 262.34(a)(4) refer to Subpart D, 265.50-265.56.

CONTINGENCY PLAN AND EMERGENCY PROCEDURES (265.50-265.56)

Item	Rule	Response
48. Plan implemented whenever fire/explosion/release could threaten human health or the environment? (265.51(b))	262C	[ ] ___ NI (N/A)
49. Does the contingency plan contain the following:		
a) actions personnel must take responding to fires/explosions/unplanned release of hazardous waste? (265.52(a & b))	262C	[X] ___ NI N/A
b) describe arrangements w/ local police, fire, hospitals, contractors, state & local emergency responders for emergency services; (265.52(c)) & (265.37(a)&(b))?	262C	[X] ___ NI N/A

c) name, addresses & phone (office & home) of emergency coordinator? (265.52)(d))	262C	[X]	NI N/A
d) list emergency equipment at the facility, including location, physical description & capabilities? (265.52(e))	262C	[X]	NI N/A
e) evacuation plan for personnel w/ signal(s), evacuation routes & alternate evacuation routes. (265.52(f))	262C	[X]	NI N/A
50. Does the facility have an Emergency Coordinator? (265.55)	262C	[X]	NI N/A
Emergency Coordinator and Emergency Procedures:			
a) emergency coordinator familiar with site operation & emergency procedures? (265.55)	262C	[X]	NI N/A
b) emergency coordinator has the authority to carry out the contingency plan? (265.55)	262C	[X]	NI N/A
c) if emergency occurred, did the emergency coordinator follow emergency procedures? (265.56)	262C	[ ]	NI N/A
d) fire/explosion/other release of hazardous waste/haz. waste constituents, could threaten human health or environment or generator has knowledge spill reached surface or ground water, did generator notify MDEQ? (Rule 306(1)(d))	262C	[ ]	NI N/A
51. Contingency plan Amendments and Copies			
a) amended: fails in emergency; changes in regulations/emergency coordinators/emergency equipment? (265.54)	262C	[ ]	NI N/A
b) copies of plan on site and sent to local emergency organizations? (265.53)	262C	[X]	NI N/A

Rule 309 refers to 262. Subpart E except 262.54 & 262.55

INTERNATIONAL SHIPMENTS (Rule 309 & 310: 40 CFR 262.50-262.60)

52. Has the facility imported or exported hazardous waste?		[X]	NI N/A
a) exporting, has the generator:			
i) notified the Administrator in writing <12 months prior to shipment? (Rule 309(1): 40 CFR 262.53(a))	262E	[ ]	NI N/A
ii) receiving country consented to accept waste. (Rule 309(1): 40 CFR 262.52(b))	262E	[ ]	NI N/A
iii) has copy of EPA Acknowledgment of Consent. (Rule 309(1): 40 CFR 262.52(c))	262E	[ ]	NI N/A
iv) complied with manifest requirements in Rule 309(2)(a-h).	262E	[ ]	NI N/A
v) if required, was an exception report filed. (309(3)(a-c))	262E	[ ]	NI N/A
b) importing, has the generator met manifest requirements? (Rule 310: 40 CFR 262.60)	262F	[ ]	NI N/A

Rule 306(1)(g) and 40 CFR 262.34(a)(1) refers to 40 CFR 265.111 & 265.114

ACCUMULATION AREA CLOSURE (265.111 & 265.114)

53. The accumulation area must be closed in a manner that:			
a) minimizes need for further maintenance (Rule 306(1)(g): 40 CFR 265.111(a))	262C	[ ]	NI N/A
b) controls/minimizes/eliminates, to protect human health & environment, the escape of haz. waste or hazardous waste constituents, leachate, run-off to ground/surface waters and air. (Rule 306(1)(g): 40 CFR 265.111(b))	262C	[ ]	NI N/A
c) all contaminated equipment, structures, and soil properly disposed of. (Rule 306(1)(g): 40 CFR 265.114)	262C	[ ]	NI N/A

COMMENTS:

Department of Environmental Quality
GENERATOR TANK INSPECTION FORM

Facility's Name _____ Part 3 Rules

Date _____ ID# _____ 1994 PA 451

__ abbreviated

FACILITY COMPLIANCE REQUIRED IN ALL AREAS

ALL TANK SYSTEMS ACCUMULATION TIME (Rule 306: 40 CFR 252.34)

NI - Not Inspected N/A - Not Applicable)

		YES	NO	
1. Has more than 90 days elapsed since tank was emptied? (If yes, operating license required per Part 5 of Rules. (Rule 306(1): 40 CFR 262.34(a))	GPT		X	NI N/A
2. Is each tank labeled or marked with the words "Hazardous Waste" (Rule 306 (1)(c): 40 CFR 252.34(a)(3))	GPT		X	NI N/A

NOTE: Rule 306(1)(a)(ii) & 40 CFR 252.34(a)(1)(ii) refer to 265 Subpart J, except 265.197(c) and 265.200 & Rule 615, except Subrule (1).

GENERAL OPERATING REQUIREMENTS (Rule 306: 40 CFR 265.194)

3. Could wastes placed in tank system cause ruptures, leaks, corrosion or other failure? (265.194 (a))	GPT		X	NI N/A
4. Controls & practices to prevent spills & overflows must include: (265.194(b))				
a) spill prevention controls. (265.194(b)(1))	GPT	X		NI N/A
b) overfill prevention controls. (265.194(b)(2)).	GPT	X		NI N/A
c) freeboard in uncovered tanks to stop overtopping by wave or wind action or precipitation. (265.194 (b)(3)).	GPT			NI N/A

NOTE: Response to leaks, spills and disposition of leaking or unfit-for-use tank systems is in 40 CFR 265.196.

5. A tank system or secondary containment system from which there has been a leak, spill or which is unfit for use, is it:				NI N/A
a) removed from service immediately? (265.196)	GPT			NI N/A
b) completed requirements in 265.196(a-f)	GPT			NI N/A

INSPECTIONS (Rule 306(1):40 CFR 265.195)

6. Where present, has the facility inspected at least once each operating day: (265.195(a))				
a) discharge, overflow/spill control equipment (daily). (265.195(a)(1))	GPT	X		NI N/A
b) monitoring equipment data (daily). (265.195(a)(3))	GPT	X		NI N/A
c) above ground portion of tank system (daily). (265.195(a)(2))	GPT	X		NI N/A
d) materials and area around tank (daily). (265.195(a)(4))	GPT	X		NI N/A
e) are the inspections documented? (265.195 (c))	GPT	X		NI N/A
7. Must inspect cathodic protection system, if present, for in-ground tanks:				
a) cathodic protection within six months after initial installation (annually thereafter). (265.195 (b) (1))	GPT			NI N/A
b) impressed current inspected and/or tested at least bimonthly. (265.195 (b) (2))	GPT			NI N/A
c) are the inspections documented? (265.195(c))	GPT			NI N/A

SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTE (Rule 306(1):40 CFR 265.198)

8. Ignitable or reactive waste must not be placed in tanks unless:				
a) treated/mixed before or immediately after placed in the tank system, so: (265.198(a)(1))				
i) resulting mixture is no longer ignitable/reactive. (265.198(a)(1)(i))	GPT			NI N/A
ii) does not cause environmental or structural damage to tank systems. (265.198(a)(1)(ii))	GPT			NI N/A
OR				
b) waste stored/treated so protected from igniting or reacting. (265.198(a)(2))	GPT	X		NI N/A
OR				
c) tank system is used solely for emergency. (265.198(1)(3))	GPT			NI N/A
9. Observes National Fire Protection Association's buffer zone for tanks w/ ignitable or reactive wastes? (265.198(b)) *(See tables 2-1 through 2-6 of NFPA's Flammable & Combustible Liquids Code - 1977" to determine compliance)*	GPT	X		NI N/A

		YES	NO	
10. Is the tank system designed, constructed, operated and maintained in conformance with requirements of Act 207, Michigan flammable liquid regulations. (Rule 615(4)	GPT		Company said	NI N/A
11. Is the tank labeled in accordance with NFPA standard # 704? (Rule 615(5))	GPT			NI N/A

INCOMPATIBLE WASTE (Rule 306(1):40 CFR 265.199)

12. Are incompatible wastes stored in separate tanks? (265.199(a)) (If not, the provisions of 265.17(b) apply).	GPT			NI N/A
13. Tank decontaminated before hazardous waste placed in it that held incompatible waste, unless 265.17(b). (265.199(b)).	GPT			NI N/A

CLOSURE AND POST-CLOSURE (265.197)

NOTE: At tank system closure refer to 265.197 for closure/post closure care, except 265.197(c).

14. If the tank system is closed, did the facility follow the requirements in 265.197? (265.197).	GPT			NI N/A

EXISTING TANK SYSTEMS
REQUIREMENTS FOR EXISTING TANK(S) CONTAINING LIQUID WASTE THAT DO NOT MEET THE REQUIREMENTS OF 265.193 (Rule 615)

15. Are above ground tanks:				
a) paved, diked or cubed or otherwise enclosed to contain not less than 100% of the largest tank? (Rule 615(2)(a))	GPT			NI N/A
b) incompatible waste or interconnected tanks must have 100% containment for each tank. (Rule 615(2)(a))	GPT			NI N/A
16. Do underground tanks:				
a) have secondary containment and a leachate withdrawal system? (Rule 615(2)(b)(i))	GPT			NI N/A
b) complete an inventory of wastes not less than twice a month? (Rule 615 (2)(b)(ii))	GPT			NI N/A
c) leachate sampling analysis at least once per year (if b shows loss, sample within 24 hours). (Rule 615(2)(b)(iii)	GPT			NI N/A

Note: If existing tanks do not have secondary containment meeting RCRA, the facility must assess the existing tank system's integrity, 265.191.
Note: The determination that secondary containment does or does not meet the standards in 265.193 can be made by the company. It does not require a certification by an independent engineer.
Note: Tanks w/out free liquids in a building w/ impermeable floor & tanks part of secondary containment system are exempt (265.190(a)&(b).

ASSESSMENT OF EXISTING TANK SYSTEM'S INTEGRITY (Rule 306(1) :40 CFR 265.191)

17. If existing tank system (before 7/14/86) does not meet the secondary containment requirements in 265.193, was an assessment made and certified by an independent engineer? (265.191)	GPT			NI N/A

CONTAINMENT AND DETECTION OF RELEASES (Rule 306(1):40 CFR 265.193)

18. Until an existing tank is upgraded to meet the secondary containment requirements in 265.193 has the facility: (265.193(i))				
a) for non-enterable underground tank, performed leak test meeting rqrmnt of 265.191(b)(5) annually: (R 265.193(i)(1))	GPT			NI N/A
b) for other than non-enterable underground tanks and ancillary equipment, the facility must:				
i) conduct an annual leak test that meets the requirements of 265.191(b)(5). (265.193(i)(2))	GPT			NI N/A
OR				
ii) an internal inspection or other tank integrity exam by an independent, qualified, reg. prof. engineer. (265.193(i)(2))	GPT			NI N/A
19. Secondary containment & detection that meets the requirements, must be provided for: (265.193)a))				
a) new tank systems prior to being put into service (any tank installed after 7-14-86). (265.193(a)(1)	GPT			NI N/A
b) existing tanks used for F020, F021, F022, F023, F026, F027 prior to 1/12/90. (265.193(a)(1))	GPT			NI N/A
c) existing tanks w/ documented age before 1/12/90 or tanks 15 years of age, which is later. (265.293(a)(3).	GPT			NI N/A
d) existing tank system, w/out documented age, upgrades done by 1/12/96 unless facility is greater than 7 years in 1988, then containment provided before facility reaches 15 years or by 1/12/90 which is later. (265.193(a)(4))	GPT			NI N/A
e) wastes which became hazardous waste after 1/12/87. (265.193(a)(5))	GPT			NI N/A

NEW TANK SYSTEMS AND UPGRADED EXISTING TANK SYSTEMS (Rule 306(1):40 CFR 265.193(c))

20. Secondary containment and detection systems must have the following: (265.193(c))				
a) tank system constructed of compatible material with sufficient strength. (265.193(c)(1))	GPT	X		NI N/A
b) adequate foundation/base. (265.193(c)(2))	GPT	X		NI N/A
c) leak detection system designed/operated to detect leaks w/in 24 hours of earliest practical time. (265.193(c)(3)).	GPT	X		NI N/A
d) sloped/drained & all liquid (leaks, precipitation) removed w/in 24 hours or in a timely manner. (265.193 (c)(4)).	GPT	X		NI N/A
e) must include one or more of the following:				
i) a liner (external to tanks) & must satisfy the following requirements. (265.193(d)(1))				
A) 100% capacity of largest tank within its boundary. (265.193(1)(i))	GPT	X		NI N/A

		YES	NO
B) prevent run-on or infiltration of precipitation unless excess of capacity. (265.193(e)(1)(ii))	GPT	X	NI N/A
C) free of cracks or gaps. (265.193(e)(1)(iii))	GPT	X	NI N/A
D) cover any area waste may come in contact with if released. (265.193(e)(1)(iv))	GPT	X	NI N/A

CEMENT LINERS ONLY

Note: If liner is cement then, must have, in addition, 265.193(e)(2)(iii & iv)

E) constructed with chemical resistant water stops in place at all joints. (25.193(e)(2)(iii))	GPT	X	NI N/A
F) impermeable, compatible interior lining or coating. (265.193(e)(2)(iv))	GPT	X	NI N/A
ii) vault system & must satisfy the following requirements. (265.193(e)(2)(i-iv))(264.175(b)(3))			
A) 100% capacity of the largest tank within its boundary. (265.193(e)(2)(i))	GPT		NI N/A
B) prevent run-on or infiltration of precipitation unless excess of capacity. (265.193(e)(2)(ii))	GPT		NI N/A
C) constructed with chemical resistant water stops in place at all joints. (265.193(e)(2)(iii))	GPT		NI N/A
D) impermeable, compatible interior lining or coating. (265.193(e)(2)(iv))	GPT		NI N/A
E) if ignitable or reactive, then provide against vapor formation and ignition. (265.193(e)(2)(v))	GPT		NI N/A
F) provide with exterior moisture barrier. (265.193(e)(2)(vi))	GPT		NI N/A
iii) double wall tanks & must satisfy the following requirements: (265.193(d)(3))			
A) designed as integral structure (inner tank with outer shell). (265.193(d)(3)(i))	GPT		NI N/A
B) protect metal surface for corrosion (interior and exterior). (265.193(e)(3)(ii))	GPT		NI N/A
C) capable of detecting releases within 24 hours. (265.193(e)(3)(iii))	GPT		NI N/A
f) ancillary equipment (note certain exclusions) must be provided with full secondary containment. (265.193)(f))	GPT	X	NI N/A

outside=wetted and inspected daily

NEW TANK SYSTEMS

DESIGN AND INSTALLATION OF NEW TANK SYSTEMS OR COMPONENTS (265.192)

21. Facility obtained written assessment that was reviewed & certified (270.11(d)) by independent qualified registered professional engineer to include:			
a) design standards and considerations? (265.192(a)(1)&(5))	GPT	X	NI N/A
b) hazard characteristics of the waste(s) to be handled? (265.192(a)(2))	GPT	X	NI N/A
c) determination by a corrosion expert, (if external shell of metal tank or metal part in contact with soil or water)? (265.192(a)(3))	GPT		NI N/A
d) if needed, design considerations for UST systems affected by vehicular traffic? (265.192(a)(4))	GPT		NI N/A
22. New tank/component & piping underground was backfilled w/non-corrosive, porous, homogeneous material & carefully compacted? (265.192(c))	GPT		NI N/A
23. All new tanks/ancillary equipment tested for tightness before covered, enclosed, put in use? (265.192(d))	GPT	X	NI N/A
24. New tank system not tight, were repairs made before covered, enclosed, put in use? (265.192(d))	GPT		NI N/A
25. Is ancillary equipment supported/protected against damage & stress? (265.192(e)).	GPT	X	NI N/A
26. Corrosion protection provided? (265.192(f))	GPT		NI N/A
27. Field fabricated corrosion protection supervised by independent expert? (265.192(f))	GPT		NI N/A
28. Is written statement kept on file at the facility and certified? (265.192(g))	GPT	X	NI N/A

NOT FOR Now Pack tank

No P.E cert for 25 gal tanks

COMMENTS:

Department of Environmental Quality
UNIVERSAL WASTE SMALL QUANTITY HANDLER (SQH) INSPECTION

Facility Name Honeywell Burdick and Jackson Part 2 Rules

Date _____ I.D. # _____ 1994 PA 451

SQH may choose to manage the following as universal waste when they accumulate quantities of 5000 kg (11,000 lbs) or less of all these wastes on site: antifreeze; batteries [except lead acid batteries managed per R 299.9804]; consumer electronics (devices containing circuit boards, liquid crystal display, or plasma display); electric lamps [fluorescent, high intensity discharge (HID), sodium vapor, mercury vapor, neon, metal halide, incandescent lamps, and cathode ray tubes (CRTs) from computers, televisions, etc.]; mercury items: thermostats, mercury switches, mercury thermometers, waste devices containing only elemental mercury; various pesticides; pharmaceuticals.

Yes/No responses that are outside of the parenthesis are violations.

(NI - Not Inspected N/A - Not Applicable)

PROHIBITIONS (Rule 228(4): 40 CFR 273.11)

		YES	NO	
1. Does SQH dispose of universal waste? (Rule 228(4): 40 CFR 273.11(a))	273.B	___	X	NI N/A
2. Does SQH dilute or treat universal waste, except responding to releases or managing certain waste when included below? (Rule 228(4): 40 CFR 273.11(b))	273.B	___	X	NI N/A

WASTE MANAGEMENT (Rule 228(4): 40 CFR 273.13, 273.14)

ANTIFREEZE: (Rule 228(4)

QTY HANDLED: ____

3. Is antifreeze managed in manner to prevent release by containing it in structurally sound packaging that is compatible w/ contents, & kept closed? Are transport vehicles & vessels managed in the same way? (Rule 228(4)(h))	273.B	___ NI N/A
4. Do containers show evidence of leakage, spillage, or damage? If so, are these containers over packed in a container that meets requirements? (Rule 228(4)(h)(ii)(B))	273.B	___ NI N/A
5. If tanks are used to store antifreeze, do they meet requirements in 40 CFR 265 Subpart J except 265.197(c), 265.200, & 265.201? (Rule 228(4) (h) (ii) (C). **[USE TANK CHECKLIST]**	273.B	___ NI N/A
6. Are containers labeled "UNIVERSAL WASTE ANTIFREEZE" or "WASTE ANTIFREEZE" or "USED ANTIFREEZE"? (Rule 228(4)(h)(iv))	273.B	___ NI N/A
7. If a release occurred, was it immediately cleaned up & properly characterized for disposal? (Rule 228(4)(e)(ii))	273.B	___ NI N/A

BATTERIES: (Rule 228(4) adopts 40 CFR 273 except 273.10 &273.18(h) requirements)

QTY HANDLED: ____

8. Are batteries managed in way to prevent releases? (Rule 228(4)(a): 40 CFR 273.13(a)	273.B	X NI N/A
9. Are batteries that show evidence of leakage, spillage, or damage that could cause leaks put in containers that are kept closed, structurally sound, compatible w/ contents of battery, & lack evidence of leakage, spillage or damage that could cause leakage? (Rule 228(4): 40 CFR 273.13(a)(1))	273.B	___ NI N/A
10. Does the handler do any of the following activities w/ batteries as long as the casings of each battery is not breached & remain intact & closed (except to remove electrolyte): sort by type, mix types in container, discharge to remove electric charge, regenerate, disassemble into individual batteries or cells, remove from consumer products, or remove electrolyte? (Rule 228(4)(a): 40 CFR 273.13(a)(2))	273.B	___ NI N/A
11. If electrolyte is removed or other wastes generated from activities in item 10, has it been determined whether it is hazardous waste? (Rule 228(4)(a): 40 CFR 273.13(a)(3))	273.B	___ NI N/A
a. If electrolyte or other waste is hazardous waste, is it managed in compliance with Parts 260-272 and Part 111? (Rule 228(4)(a): 40 CFR 273.13(a)(3))	273.B	___ NI N/A
b. If electrolyte or other waste is not hazardous waste, is it managed in compliance with Parts 31, 115 or 121 of 451 & local requirements? (Rule 228(4)(a): 40 CFR 273.13(a)(3))	273.B	___ NI N/A
12. Are batteries or container(s) of batteries labeled w/ either: "UNIVERSAL WASTE-BATTERIES" or "WASTE BATTERIES" or "USED BATTERIES". (Rule 228(4)(a): 40 CFR 273.14(a))	273.B	X NI N/A

CONSUMER ELECTRONICS: (Rule 228(4)

QTY HANDLED: ____

13. Are electronics managed in a manner that prevents breakage or the release of any universal waste or components of universal waste by containing electronics in packaging that will prevent breakage during normal handling conditions? (Rule 228(4)(f)(i))	273.B	X NI N/A
14. Is packaging in which the electronics are contained labeled either "UNIVERSAL WASTE CONSUMER ELECTRONICS" or "UNIVERSAL WASTE ELECTRONICS"? (Rule 228(4)(f)(ii))	273.B	X NI N/A
15. Have releases been properly contained, & have residues been characterized, & properly disposed? (Rule 228(4)(f)(iii)	273.B	___ NI N/A
16. Does handler do anything beyond any of the following: repair electronics for direct reuse(Rule 228(4)(g)(i); remove other univ. wastes from cons. electronics (Rule 228(4)((g)(ii)); remove modular components for reuse (Rule 228(4)(g)(iii)	273.B	___ NI N/A

ELECTRIC LAMPS: (Rule 228(4) ;273.13(c);273.14(d)

QTY HANDLED: ____

17. Are lamps crushed or broken and facility trying to manage as universal waste? (universal waste electric lamps shall not be crushed or broken under MI rule) (Rule 228(4)(c)(i)) ***Note: different from EPA regulation***	273.B	X NI N/A
18. Are lamps managed in a manner to prevent breakage or the release of any universal waste or components of universal waste by containing unbroken lamps in structurally sound packaging that is compatible with contents of lamps and will prevent breakage, and packaging kept closed? (Rule 228(4(c)(ii))	273.B	X NI N/A
19. Are lamps or packaging containing lamps labeled either "UNIVERSAL WASTE ELECTRIC LAMP(S)" or "WASTE ELECTRIC LAMP(s)"-or "USED ELECTRIC LAMP(s)". (Rule 228(4)(c)(iv)) ***Note: different from EPA regulation***	273.B	X NI N/A
20. Are lamp fragments or residues, & all lamps that show evidence of breakage, leakage, or damage that could cause release of mercury or other hazardous constituents to the environment immediately contained in packaging that is structurally sound & compatible w/ content, & kept closed? (Rule 228(4)(c)(iii)) ***Note: different from EPA regulation***	273.B	___ NI N/A
21. If lamp fragments or residues are generated, has it been determined whether it is hazardous waste? (Rule 228(4)(c)(iii (B)) ***Note: different from EPA regulation which allows broken lamps to continue to be managed as universal waste***	273.B	___ NI N/A
a. If waste is characteristic is it managed in compliance w/ Part 111, Act 451: 40 CFR Part 260-272?	273.B	___ NI N/A
b. If waste is not characteristic is it managed in compliance w/ Part 115 of Act 451?	273.B	___ NI N/A

MERCURY DEVICES: (Rule 228(4) ; 40 CFR 273.13 & 273.14

QTY HANDLED: ____

22. Are devices managed to prevent releases? (Rule 228 (4)(d): 40 CFR 273.13(c))	273.B	___ NI N/A
23. Are mercury devices that show evidence of leakage, spillage, or damage that could cause leaks placed in a container that is closed, structurally sound, compatible w/ contents of device, & lack evidence of leakage, spillage or damage that could cause leakage, & designed to prevent the escape of mercury by volatilization or other means? (Rule 228 (4)(d): 40 CFR 273.13(c)(1))	273.B	___ NI N/A
24. Are mercury devices or containers of mercury devices labeled either "UNIVERSAL WASTE THERMOSTAT(S) " or "WASTE MERCURY THERMOSTAT(S)" or "USED MERCURY THERMOSTAT(S)".(Rule 228 (4)(d): 40 CFR 273.14(d))	273.B	___ NI N/A
25. Does handler removing ampules meet the following conditions?		
a. Does facility try to prevent breakage and is doing removal only over a containment device? (Rule 228 (4)(d): 40 CFR 273.13(c)(2)(i & ii))	273.B	___ NI N/A
b. Does facility have a clean-up system available to transfer spilled material to another container & use it immediately w/ broken or leaking ampules? (Rule 228 (4)(d): 40 CFR 273.13(c)(2)(iii & iv))	273.B	___ NI N/A
c. Is facility area well ventilated & monitored to ensure compliance w/ OSHA exposure limits? (Rule 228 (4)(d): 40 CFR 273.13(c)(2) (v))	273.B	___ NI N/A
d. Does facility have employees familiar w/ proper waste handling & emergency procedures? (Rule 228 (4)(d): 40 CFR 273.13(c)(2)(vi))	273.B	___ NI N/A
e. Are removed ampules stored in closed, non-leaking container that is in good condition? (Rule 228 (4)(d): 40 CFR 273.13(c)(2)(vi))	273.B	___ NI N/A
f. Are removed ampules packed in container with packing material to prevent breakage? (Rule 228 (4)(d): 40 CFR 273.13(c)(2)(vii))	273.B	___ NI N/A
26. When devices do not contain ampules & handler removes original housings that hold mercury, does handler immediately seal original housing to prevent mercury release & follow all ampule management requirements? (Rule 228 (4)(d): 40 CFR 273.13(c)(3))	273.B	___ NI N/A
27. If waste is generated from removal of ampules or housings, or if clean-up residues are generated, is it determined if it is hazardous waste? (Rule 228 (4)(d): 40 CFR 273.13(c)(3)(i)(A&B), 273.13(c)(4)(i)	273.B	___ NI N/A
a. If waste is characteristic, is it managed in compliance w/ part 260-272 and Part 111? (Rule 228 (4)(d): 40 CFR 273.13(c)(4)(ii))	273.B	___ NI N/A
b. If waste is not hazardous waste, is it managed in compliance w/ Parts 115 & 121 of Act 451, as applicable? Rule 228 (4)(d): 40 CFR 273.13(c)(4)(iii))	273.B	___ NI N/A

None Observed

PESTICIDES: Rule 228(4) adopts 40 CFR 273 except 273.10 & 273.18(h)

QTY HANDLED: ____

28. Handler prevents releases by containing pesticides in containers that are closed, structurally sound & compatible w/ pesticide, & does not show evidence of leakage, spillage or damage? (Rule 228(4)(a): 40 CFR 273.13(b)(1))	273.B	___ NI N/A
29. If original container is in poor condition, is it over-packed in acceptable container? (Rule 228(4)(a): 40 CFR 273.13(b)(2))	273.B	___ NI N/A
30. If stored in tank, are requirements of 40 CFR Part 265, Subpart J met except 265.197(c), 265.200, & 265.201? **[USE TANK CHECKLIST]** (Rule 228(4)(a): 40 CFR 273.13(b)(3))	273.B	___ NI N/A
31. If stored in transport vehicle or vessel, is it closed, structurally sound & compatible w/ pesticides & shows no evidence of leakage, spillage or damage?? (Rule 228(4)(a): 40 CFR 273.13(b)(4))	273.B	___ NI N/A
32. Are pesticides in a container, tank or transport vehicle labeled either "UNIVERSAL WASTE-PESTICIDE(s)" or "WASTE-PESTICIDE(s)" (Rule 228(4)(a): 40 CFR 273.14(b) **[See 273.14(c) if 273.14(b) not possible]**	273.B	___ NI N/A

PHARMACEUTICALS: (Rule 228(4)

QTY HANDLED: ____

33. Are pharmaceuticals managed in a manner to prevent release of any universal waste or components of universal waste by containing pharmaceuticals in structurally sound packaging that is compatible w/ contents & will prevent breakage, & kept closed? Are containers that do not meet these conditions over packed in a container that does? (Rule 228(4)(e)(i))	273.B	___ NI N/A
34. Does handler disassemble packaging & sort pharmaceuticals? (Rule 228(4)(e)(iii))	273.B	___ NI N/A

35. Are incompatible pharmaceuticals segregated & adequate distance maintained to prevent contact w/ incompatible materials? (Rule 228(4)(e)(iv))	273.B	[ ] NI N/A
36. If a release occurred, was it immediately cleaned up and properly characterized for disposal? (Rule 228(4) (e) (ii))?	273.B	[ ] NI N/A

ACCUMULATION TIME LIMITS (Rule 228(4): 40 CFR 273.15)

37. Is universal waste accumulated one year or less? (Rule 228(4)(a): 40 CFR 273.15(a)) (if no go to question 38)	273.B	[X] NI N/A
38. If accumulated over one year, is accumulation necessary to facilitate proper recovery, treatment or disposal? (burden on handler to demonstrate) (Rule 228(4)(a): 40 CFR 273.15(b))	273.B	[ ] NI N/A
39. Is length of time universal wastes stored documented by one of the following:		
a. container marked or labeled w/ earliest date when universal waste became a waste? (Rule 228(4)(a): 40 CFR 273.15(c)(1))	273.B	[ ] NI N/A
b. individual items of universal waste marked or labeled w/ earliest date it became a waste?? (Rule 228(4)(a): 40 CFR: 273.15(c)(2))	273.B	[ ] NI N/A
c. inventory system maintained on-site that identifies date each item became a universal waste? (Rule 228(4)(a): 40 CFR 273.15(c)(3))	273.B	[ ] NI N/A
d. inventory system maintained on-site that identifies earliest date items in a group or group of containers became a universal waste? (Rule 228(4)(a): 40 CFR (273.15(c)(4))	273.B	[ ] NI N/A
e. universal waste placed in a specific accumulation area & the earliest date is identified when waste was first put in area or date received? (Rule 228(4)(a): 40 CFR (273.15(c)(5))	273.B	[X] NI N/A
f. any other method when demonstrates length of time universal waste accumulated & date it became a waste or received? (Rule 228(4)(a): 40 CFR (273.15(c)(6))	273.B	[ ] NI N/A

EMPLOYEE TRAINING (Rule 228(4): 40 CFR 273.16)

40. Are employees familiar w/ universal waste handling/emergency procedures, relative to their responsibilities? (Rule 228(4): 40 CFR 273.16))	273.B	[X] NI N/A

RESPONSE TO RELEASE (Rule 228(4): 40 CFR 273.17)

41. Are releases of universal waste & other residue immediately contained? (Rule 228(4): 40 CFR 273.17(a))	273.B	[ ] NI N/A
42. Is material from release characterized? (Rule 228(4): 40 CFR 273.17(b))	273.B	[ ] NI N/A
43. If released material is hazardous waste is it managed as required under Parts 260 – 271 and Part 111? (Rule 228(4): 40 CFR 273.17(b))	273.B	[ ] NI N/A

OFF-SITE SHIPMENTS (Rule 228(4): 40 CFR 273.18

44. Is waste sent to another handler, destination facility or foreign destination? (Rule 228(4)(a): 273.18(a))	273.B	[X] NI N/A
45. If the SQH self-transports waste, does it comply with the universal waste transporter requirements? (Rule 228(4)(b)	273.B	[ ] NI N/A
46. If waste is a USDOT hazardous material, are USDOT requirements met w/regard to package/labels/ marking/placards/shipping papers? (Rule 228(4)(a): 273.18(c))	273.B	[X] NI N/A
47. Prior to shipping universal waste off-site did receiver agree to receive shipment? (Rule 228(4)(a): 40CFR 273.18(d))	273.B	[X] NI N/A
48. If universal waste shipped off-site is rejected by other handler or destination facility, did originating handler either:		
a. receive the waste back? (Rule 228(4)(a): 40 CFR 273.18(e)(1))	273.B	[ ] NI N/A
b. agree to where shipment will be sent? (Rule 228(4)(a): 40 CFR 273.18(e)(2)	273.B	[ ] NI N/A
49. If handler rejects part or full load from another handler, did receiving handler contact originating handler & discuss either:		
a. sending the waste back to originating handler? : (Rule 228(4)(a): 40 CFR 273.18(f)(1)) OR	273.B	[ ] NI N/A
b. agreeing to where shipment will be sent? (Rule 228(4)(a): 40 CFR 273.18(f)(2))	273.B	[ ] NI N/A
50. If handler received shipment of hazardous waste that is not universal waste, was the WHMD District Supervisor or designee immediately notified? (Rule 228(4)(a)):40 CFR 273.18(g))	273.B	[ ] NI N/A
51. If handler received a shipment of non-hazardous, non-universal waste, was the waste managed in accordance w/ applicable waste regulations (e.g. solid, liquid industrial, or medical waste)? (Rule 228(4)(a): 40 CFR 273.18(h))	273.B	[ ] NI N/A

EXPORTS (Rule 228(4): 40 CFR 273.20)

52. If waste is sent to a foreign destination does handler:		
a. comply with primary exporter requirements in 40 CFR 262.53, 262.56(a)(1-4 &6) and(b) and 262.57? (Rule 228(4): 40 CFR 273.20(a))	273.B	[ ] NI N/A
b. export with consent of receiving country and in compliance with Acknowledgment of Consent, Subpart E, 40 CFR 262? (Rule 228(4): 40 CFR 273.20(b))	273.B	[ ] NI N/A
c. provide copy of EPA Acknowledgement of Consent to transporter? (Rule 228(4): 40 CFR 273.20(c))	273.B	[ ] NI N/A

TRANSPORTER (Rule 228(6): 40 CFR 273 subpart D except 273.50, 53)

53. Does transporter dispose of universal waste? (Rule 228(6): 40 CFR 273.51(a))	273.D	[ ] NI N/A
54. Does transporter dilute or treat universal waste, except if responding to releases? (Rule 228(6): 40 CFR 273.51(b))	273.D	[ ] NI N/A
55. If transporting responds to release, do they immediately contain it and characterize residue? If hazardous waste, does transporter meet requirements in 40 CFR 262? (Rule 228(6): 40 CFR 273.54))	273.D	[ ] NI N/A
56. If universal waste stored at transfer facility over 10 days, does transporter meet applicable handler requirements? (Rule 228(6): 40 CFR 273.54))	273.D	[ ] NI N/A
57. Does transporter comply w/ USDOT requirements for package/labels/marking/placards/shipping papers if universal waste is also hazardous material? ***Shipping papers cannot describe universal waste as "hazardous waste, (l) or (s), n.o.s." nor have waste added to USDOT proper shipping name.*** (Rule 228(6)(a): 40 CFR 273.52 and 273.55(b))	273.D	[ ] NI N/A
58. Does transporter meet export conditions contained in 273.56 (dependent on which country will receive shipment)? (Rule 228(6): 40 CFR 273.56)	273.D	[ ] NI N/A
a. has a copy of EPA Acknowledgement of Consent with shipment? (Rule 228(6): 40 CFR 273.56(a)	273.D	[ ] NI N/A
b. delivers shipment to facility designated by person initiating the shipment? (Rule 228(6): 40 CFR 273.56(b))	273.D	[ ] NI N/A

COMMENTS:

DEQ

Department of Environmental Quality, Waste and Hazardous Materials Division

USED OIL INSPECTION FORM – GENERATORS

Facility's Name Honeywell Burdick & Jackson Part 8 Rules

Date 7/19/16 ID# MIDO72575731 1994 PA 451

Note: *Used oil is defined as "any oil which has been refined from crude oil, or any synthetic oil which has been used and as a result of use, is contaminated with physical or chemical impurities." R 299.9109*

APPLICABILITY (Rule 809)

NONE OBSERVED

NI – Not Inspected, N/A – Not Applicable

		YES	NO
1. Does the facility generate used oil and any of the following materials which are subject to regulation as used oil:			
a) mixture of used oil and hazardous waste generated by a CESQG regulated pursuant to Rule 205? (Rule 809(1)(a))	UOA		
b) material that contains or is otherwise contaminated w/ used oil & is burned for energy recovery? (Rule 809(1)(b))	UOA		
c) used oil that is drained/removed from materials that contain or contaminated w/ used oil? (Rule 809(1)(c))	UOA		
d) mixture of used oil and fuel? (Rule809(1)(d))	UOA		
e) material which is produced from used oil & is burned for energy recovery? (Rule 80991)(e))	UOA		
f) used oil that is burned for energy recovery & any fuel produced from used oil by processing, blending or other treatment & exceeds the following: (Rule 809(1(f))			
i) maximum arsenic concentration of 5ppm	UOA		
ii) maximum cadmium concentration of 2ppm	UOA		
iii) maximum chromium concentration of 10ppm	UOA		
iv) maximum lead concentration of 100ppm	UOA		
v) minimum flash point of 100 degrees Fahrenheit	UOA		
vi) maximum total halogen concentration of 4,000ppm	UOA		
g) recycled and a hazardous waste solely because it exhibits a hazardous characteristic? (Rule 809(1)(g))	UOA		
h) used oil contains PCB's at any concentration of 50ppm or less? (May also be subject to 40 CFR Part 761) (Rule 809(2)(l))	UOA		
2. Does the facility generate any of the following which exempts it from regulation as used oil: (may be subject to regulation as a hazardous waste)			
a) mixture of used oil and hazardous waste except as specified in Rule 809(1)(a)? (See question 1.a.) (Rule 809(2)(a))	UOA		
b) used oil including metalworking oils/fluids containing chlorinated paraffin w/ > 1000 ppm total halogens which hasn't been successfully rebutted by demonstrating that it does not contain significant concentrations of halogenated hazardous constituents in 40 CFR Part 261, Appendix VIII? (Rule 809(2)(b))	UOA		
c) metalworking oils/fluids w/ chlorinated paraffin reclaimed through a tolling agreement? (Rule 809(2)(b)(i))	UOA		
d) used oil w/ chlorofluorocarbons from refrigeration units going for reclaim? (Rule809(2)(b)(ii))	UOA		
e) material that contains or is otherwise contaminated w/ used oil from which the oil has been removed?(Rule 809 (2)(c))	UOA		
f) mixture of used oil/diesel fuel that is mixed on used oil generator's site & used in their own vehicles? (Rule 809(2)(d))	UOA		
g) used oil & material derived from used oil that are disposed of or used in a manner constituting disposal? (Rule 809(2)(e))	UOA		
h) used oil re-refining distillation bottoms used as feed stock to manufacture asphalt products? (Rule 809(2)(f))	UOA		
i) wastewater, the discharge of which is subject to §402 or §307(b) of the CWA & is contained w/ de minimis quantities of used oil? (Rule 809((2)(g))	UOA		
j) mixture of used oil/crude or natural gas liquid for insertion into a crude oil pipeline? (Rule 809(2)(h))	UOA		
k) mixture of oil/crude or nature gas liquid w/ less than 1% used oil if being stored/transported to crude oil pipeline or petroleum refinery for insertion into process before crude distillation or catalytic cracking? (Rule 809(2)(i))	UOA		
l) used oil for insertion into petroleum refining process before crude distillation or catalytic cracking w/out prior mixing if used oil constitutes less than 1% of crude oil feed? (Rule 809 (2)(j))	UOA		
m) used oil, unintentionally introduced, is captured by a hydrocarbon recovery system or wastewater treatment system at a petroleum refinery & inserted into the refining process? (Rule 809(2)(l))	UOA		
n) tank bottoms from stock tanks w/mixture of used/crude oil or nature gas liquids? (Rule 809(2)(m)	UOA		
o) used oil produced on vessels from normal shipboard operations while on-ship? (Rule 809(2)(n))	UOA		
p) specification used oil fuel once the facility demonstrates compliance w/ R 299.9815(3)(b),(c)&(f)? (Rule809(2)(o))	UOA		
q) used oil containing polychlorinated biphenyls at 50 ppm or greater? (Rule 809(2)(p))	UOA		

- Oil from vacuum pump is managed as hazardous waste.
- No other used oil was observed during the inspection.

GENERATOR REQUIREMENTS (Rule 810)

NOTE: *Used oil generator requirements do not apply to: (1) farmers who generate, in a calendar year, an average of 25gallons per month or less from vehicles or machinery used on the farm, or (2) household do-it-yourselfer*

		YES	NO	
3. Is the used oil stored in units other than containers or tanks? (Rule 810(4)	UOA	[ ]	[ ]	NI N/A
a) in good condition? (40 CFR 279.22(b)(1))	UOA	[ ]	[ ]	NI N/A
b) not leaking (no visible leaks)? (40 CFR 279.22(b)(2))	UOA	[ ]	[ ]	NI N/A
4. Are all containers & above ground tanks storing used oil labeled/marked "Used Oil"? (40 CFR 279.22(c)(1))	UOA	[ ]	[ ]	NI N/A
5. Are fill pipes used to transfer used oil into underground tanks labeled/marked "Used Oil"? (40 CFR 279.22(c)(2))	UOA	[ ]	[ ]	NI N/A
6. Upon detection of a release does the facility:				
a) stop the release? (40 CFR 279.22(d)(1))	UOA	[ ]	[ ]	NI N/A
b) contain the released used oil? (40 CFR 279.22(d)(2))	UOA	[ ]	[ ]	NI N/A
c) clean-up and manage the released used oil & other material? (40 CFR 279.22(d)(3))	UOA	[ ]	[ ]	NI N/A
d) if necessary to prevent future release, repair/replace any leaking oil containers or tanks? (40 CFR 279.22(d)(4))	UOA	[ ]	[ ]	NI N/A

GENERATOR REQUIREMENTS FOR ON-SITE BURNING IN SPACE HEATER
(Rule 810 refers to 40 CFR 279.23)

7. Does facility that burns used oil in oil-fired space heater(s):				
a) burn only used oil generated by the owner/operator or from household do-it-yourselfers? (40 CFR 279.23(a))	UOA	[ ]	[ ]	NI N/A
b) burn in heaters designed to have a maximum capacity of not more than 0.5 million BTU per hour?(40 CFR 279.23(b))	UOA	[ ]	[ ]	NI N/A
c) have combustion gases vented to the ambient air? (40 CFR 279.23(c))	UOA	[ ]	[ ]	NI N/A

GENERATOR REQUIREMENTS FOR OFF-SITE SHIPMENTS OF USED OIL
(Rule 810 refers to 40 CFR 279.24)

8. Does the facility use a transporter with an EPA identification number? (Rule 810 refers to 40 CFR 279.24)	UOA	[ ]	[ ]	NI N/A

OR

9. If the facility does not use a transporter w/ an EPA identification number, does it meet one of the following exemptions?				
a) self transportation of small amounts to approved collection centers provided that the generator transports:				
i) the used oil in a vehicle owned by the generator or an employee of the generator? (40 CFR 279.24(a)(1))	UOA	[ ]	[ ]	NI N/A
ii) no more than 55 gallons of used oil at one time? (40 CFR 279.24(a)(2))	UOA	[ ]	[ ]	NI N/A
iii) to a used oil collection center that is registered, licensed, permitted or recognized by government? (40 CFR 279.24(a)(3))	UOA	[ ]	[ ]	NI N/A
b) self transportation of small amounts to aggregation point owned by the generator provided that the generator transports: (40 CFR 279.24(b))				
i) the used oil in a vehicle owned by the generator or an employee of the generator? (40 CFR 279.24(b)(1))	UOA	[ ]	[ ]	NI N/A
ii) no more than 55 gallons of used oil at one time? (40 CFR 279.24(b)(2))	UOA	[ ]	[ ]	NI N/A
iii) the used oil to a used oil aggregation point that is owned/operated by the same generator? (40 CFR 279.24(b)(3))	UOA	[ ]	[ ]	NI N/A
c) used oil is reclaimed and the processor returns the oil to the generator under tolling for use as lubricant, cutting oil, or coolant? (40 CFR 279.24(c))	UOA	[ ]	[ ]	NI N/A
i) the contract indicates the type and amount of used oil and frequency? (40 CFR 279.24(c)(10))	UOA	[ ]	[ ]	NI N/A
ii) the contract indicates the vehicle used to transport both ways is owned by the processor? (40 CFR 279.24(c)(2))	UOA	[ ]	[ ]	NI N/A
iii) the contract indicates the oil will be returned to the generator? (40 CFR 279.24(c)(3))	UOA	[ ]	[ ]	NI N/A

USED OIL DISPOSAL (Rule 816)

10. Is used oil that cannot be recycled & is being disposed of & is not a hazardous waste managed in accordance w/ applicable federal & state regulations? (Rule 816(2))	UOA	[ ]	[ ]	NI N/A
11. Is the used oil used as a dust suppressant? (Rule 816(3))	UOA	[ ]	[ ]	NI N/A

COMMENTS:-

Inspection Checklist for Subpart CC: Air Emission Standards (Containers)

Item # 40 CFR:

CC-1	265. 1080	**Do any of the following exclusions apply? If yes, please circle.**	YES	NO

Applicability: The air emission requirements apply to units subject to subpart I * unless the following apply (circle if applicable):

1. Waste was placed in unit prior to Oct. 6, 1996, and none has been added since.
2. The container capacity is less than .1 cubic meter (26 gallons)
3. A unit (e.g. tank) has stopped adding waste and is undergoing closure
4. The unit is used solely for onsite treatment or storage as a result of remedial activities required under corrective action, Superfund, or other similar state program
5. The unit is used solely to manage radioactive mixed waste
6. The unit is regulated by and operates in accordance with Clean Air Act regulations

***Note: 1. Satellite containers are exempt 2. CESQG's and SQG's are exempt**

CC-2	265.1083	**Do any of the following exemptions apply? If yes, please circle**	YES	NO

General Standards: The owner/operator must control air emissions from waste management units except the unit is exempt if (please circle if applicable):

1. All hazardous waste entering the unit has an average VO concentration at the point of origination less than 500 parts per million by weight (waste determination required)
2. The organic content of all waste entering the unit has been reduced by one of the 8 acceptable destruction or removal processes.
3. The unit is a tank used for certain biological treatment
4. The hazardous waste placed in the unit meets the LDR numerical concentration limits or has been treated using the specified LDR treatment technology (for organics)
5. The unit is a tank used for bulk feed to an incinerator and meets certain requirements

CC-3	265.1084	**Waste Determination:**	Determination Not Needed	**Determination Needed**

Was the VO concentration properly determined for each waste which the facility manages in a unit which does not meet Subpart CC requirements? The concentration must be determined by either direct measurement or knowledge. Please see 265.1084 for specific requirements for measurement and knowledge. Determination is not needed for waste managed in containers which meet standards. It may be necessary to evaluate container management prior to requiring VO concentration determination.

#	NA=Not Applicable, NI=Not Inspected, OK= In Compliance, DF= Deficiency	NA	NI	OK	DF

CONTAINER MANAGEMENT 265.1087

Level 1	Level 2	Level 3
Larger than 26.4 gallons and less than or equal to 122 gallons, or larger than 122 gallons and do not manage H.W. in light material service	Larger than 122 gallons and manage H.W. "in light material service" (definition at 265.1081)	Larger than 26.4 gallons and treat H.W. by a stabilization process
CC-4 265.1087 Controls		
One of the following: -Use containers that meet DOT requirements -Use a cover and control with no visible gaps, holes or other open spaces into the interior of the container -Use organic vapor suppression on or above the container 265.1087(c)	One of the following: -Use containers that meet DOT requirements -Use containers that operate with no detectable emissions (method 21) -Use containers that are demonstrated to be vapor-tight within the last 12 months (method 27) 265.1087(d)	-Containers used to stabilize H.W. with volatile organics greater than 500 ppm -For waste stabilized in a container either: 1.container must be vented directly to a control device; or 2.container is vented inside an enclosure which is exhausted through a closed vent to a control device -Conservation vents are not allowed 265.1087(b)(2)

Level 1			Level 2	Level 3			
#	NA=Not Applicable, NI=Not Inspected, OK= In Compliance, DF= Deficiency			NA	NI	OK	DF
CC -5	265.1087	Waste transfer requirements					
No waste transfer requirements apply			-Waste transfer requirements apply regardless of container alternative used in level 2 -Transfer waste into or out of a container in such a manner as to minimize exposure of the waste to the atmosphere. Acceptable methods include a submerged fill pipe, vapor recovery system, or fitted opening with a line purge 265.1087(b)(3)	Not applicable			
CC-6	265.1087	Operating requirements					
The covers, openings, and closure devices should be closed except: 1. When transferring H.W. in and out of the containers 2. between batch transfer not exceeding 15 minutes between transfer (note: if the person performing the transfer leaves the area, or the process shuts down, the container must be closed) 3. While performing sampling and equipment access 4. Conservation and safety vents are allowed -Containers may be open while performing sampling or equipment access -Safety valves and conservation vents may be used if normally left in close position -A cover need not to be on a RCRA empty container, as defined in 40 CFR 261.7 265.1087(c)(3), (d)(3)				-If the vapors are directly vented to a control device, there are specific design and operating criteria that must be met same as tanks that have closed vent and control device systems -If an enclosure is used, the enclosure must meet the design and operating criteria specified in "Procedure T-Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741 The container, enclosure, control device or closed vent system may have safety relief devices.			
CC-7	265.1089	Inspection requirements					
Minimal inspection required: - when facility accepts container and it is not emptied within 24 hours -if wastes are stored greater than a year, then visually inspect once a year If inspections are required, facility must develop written plan and schedule to perform inspection 265.1087(c)(4), (d)(4)				Inspection requirements are the same as for tanks			
CC- 8	265.1087	Repair requirements					
When a defect is detected, attempt to repair within 24 hours must be made and: 1. Repair within 5 calendar days or empty and remove the container from service 2. Do not use until defect is repaired 265.1087(c)(4), (d)(4)				Necessary corrective measures shall be immediately implemented to ensure that the control device is operated in compliance			
CC- 9	265.1090	Recordkeeping requirements					
-If container exceeds 122 gallons and does not meet DOT standards, records indicating that the container is not managing H.W. in light material service			Since Level 2 waste is "in light material service", no records need to be kept	Depends upon how the organic emissions are vented: -If an enclosure is used, records must be maintained for the most recent set of calculations and measurements performed to verify that the enclosure meets the criteria of a permanent total enclosure (Procedure T) -Records for the closed vent and control device system are the same for those used on tanks(265.1090)(e)			

Comments:

INTERIM STATUS FACILITIES ORGANIC AIR
EMISSION STANDARDS FOR EQUIPMENT LEAKS - Subpart BB

Facility's Name Honeywell Burdick & Jackson

Date 2/19/16 ID# MID072575731

Note: Use of the words "process vents" means process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction or air or steam stripping operations managing hazardous waste with organic concentrations of at least 10 ppmw (time weight annual average basis).
Note: Total Organic Emissions shall be abbreviated to TOE
Note: Equipment with closed-vent systems and control devices shall comply with the provisions of section 265.1033.

(rev. 7/3/96 - EAB-MDEQ)

NI - not inspected N/A - not applicable

	YES	NO	NI	N/A

APPLICABILITY (40 CFR 265.1050)

1. If the equipment contains or contacts hazardous waste w/ organic concentrations of at least 10 percent by weight:		
a) Are the units subject to the permitting requirements of part 270? (265.1050(b)(1))	DAE	X __*
OR		
b) Are there hazardous waste recycling units located at the facility that are otherwise subject to the permitting requirements? (265.1050(b)(2))	DAE	__ X*

* If the answers to the above questions are no the following regulations do not apply.

- diaphragm to load into tank
- Centrifuge pump seals to truck/rail

STANDARDS: PUMPS IN LIGHT LIQUID (40 CFR 265.1052)

Note: Delays in repair are allowed see 265.1059 (#37)
Note: Did the owner/operator subject to the provisions of this subpart comply with the required test methods and procedures: (265.1063(b-I)) (#41)

2. Pump equipped w/ duel mechanical seal system that includes a barrier fluid system? If yes, its exempt from monthly monitoring (#5) and visual inspections (#6) if: (265.1052(d))		__ X NI N/A
a) Each duel mechanical seal system is:		
I) Operated with a barrier fluid with pressure greater than the pump stuffing box pressure. (265.1052(d)(1)(I))	DAE	[ ] __ NI (N/A)
OR		
ii) Has a barrier fluid degassing reservoir connected by closed-loop to a control device. (265.1052(d)(1)(ii))	DAE	[ ] __ NI (N/A)
OR		
iii) System that purges the barrier fluid into a hazardous waste stream w/no detectable emissions? (265.1052(d)(1)(iii))		[ ] __ NI (N/A)
b) Barrier fluid is not a hazardous waste w/ organic concentrations 10% or greater by weight. (265.1052(d)(2))	DAE	[ ] __ NI (N/A)
c) Each barrier fluid system equipped w/ a sensor to detect failure of the seal/barrier fluid system. (265.1052(d)(3))	DAE	[ ] __ NI (N/A)
d) Each calendar week pump has visual inspection for signs of liquids dripping from pump seals. (265.1052(d)(4))	DAE	[ ] __ NI (N/A)
e) Each sensor is checked: (265.1052(d)(5)(I))		
I) Daily.	DAE	[ ] __ NI (N/A)
OR		
ii) Equipped with audible alarm that is checked monthly to see if working.	DAE	[ ] __ NI (N/A)
f) Owner/operator has determined a criteria indicating failure of the seal/barrier fluid system. (265.1052(d)(5)(ii))	DAE	[ ] __ NI (N/A)
g) Indications of liquids dripping from pump seal/sensor means failure of seal/barrier fluid system & a leak has been detected: (265.1052(d)(6)(I))		
I) Was it repaired as soon as practicable but no later than 15 calendar days after detected? (265.1052(d)(6)(ii))	DAE	[ ] __ NI (N/A)
ii) A first attempt at repair was made no later than 5 calendar days after leak is detected? (265.1052(d)(6)(iii))	DAE	[ ] __ NI (N/A)
3. The pump ~~designed~~ designated as in 264.1064(g)(2) for no detectable emissions as indicated by an instrument reading of <500 ppm above background? Yes, pump exempt from monthly monitoring (#5), visual monitoring (#6), repairs (#7a & #7b) and barrier fluid system (#2) if: (265.1052(e))		No designation made __ X NI N/A
a) It does not have an externally actuated shaft penetrating the pump housing. (265.1052(e)(1))	DAE	[ ] __ NI (N/A)

No alternating schedule – 3 months is used

		YES NO NI N/A
b) It operates with no detectable emissions as indicated w/ emission reading of <500 ppm. (265.1052(e)(2))	DAE	[ ] ___ NI N/A
c) Is tested for compliance initially, annually and when requested by Regional Administrator. (265.1052(e)(3))	DAE	[ ] ___ NI N/A
4. Is the pump equipped with a closed-vent system capable of capturing and transporting any leakage from seal(s) to the control device? If yes, the pump is exempt from monthly monitoring (#5), visual monitoring (#6), repairs (#7a & #7b), barrier fluid system (#2) and no detectible emission (#3). (265.1052(f))	DAE	___ X NI N/A
5. Is each pump in light liquid service monitored monthly to detect leaks? (265.1052(a)(1)) 3 months	DAE	[ ] X NI N/A
6. Does each pump in light liquid service have a visual inspection each calendar week for indications of liquid dripping? (265.1052(a)(2))	DAE	[ ] ___ NI N/A
7. Was an instrument reading of 10,000 ppm or greater measured or were there are any indications of liquids dripping from the pump seal? If yes, a leak is detected and:	DAE	___ X NI N/A
a) Was it repaired as soon as practicable but no later than 15 calendar days after detected? (265.1052(c)(1))	DAE	[ ] ___ NI N/A
b) Was a first attempt at repair made no later than 5 calendar days after leak is detected? (265.1052(c)(2))	DAE	[ ] ___ NI N/A

STANDARDS: COMPRESSORS (40 CFR 265.1053) N/A

NOTE: Delays in repair are allowed see 265.1059 (#37)

8. Is the compressor designed as described in 265.1064(g)(2), for no detectable emissions indicated by instrument reading of <500 ppm above background? If yes the compressor is exempt from seal system and operation (#10-11), barrier fluid concentration (#12), barrier system sensor(#13-14), criteria for failure (#15), leak detection/repair (#16) and closed-vent (#9). (265.1053(I))	DAE	___ ___ NI N/A
9. Is the compressor equipped with a closed-vent system capable of capturing and transporting leakage from the seal(s) to a control device in compliance w/ 265.1060? If yes, the compressor is exempt from seal system (#10) and seal system operation (#11). (265.1053(h))	DAE	___ ___ NI N/A
10. Each compressor equipped w/ seal system that has barrier fluid system that prevents leakage of TOE? (265.1053(a))	DAE	[ ] ___ NI N/A
11. Is each compressor seal system: (265.1053(b))		
a) Operated with the barriers fluid at a greater pressure than the stuffing box pressure? (265.1053(b)(1))	DAE	[ ] ___ NI N/A
OR		
b) Equipped with a barrier fluid system connected by a closed-vent system to a control device? (265.1053(b)(2))	DAE	[ ] ___ NI N/A
OR		
c) Equipped with a system that purges the barrier fluid system with no detectable emissions? (265.1053(b)(3))	DAE	[ ] ___ NI N/A
12. Is the barrier fluid system a hazardous waste w/ an organic concentration of 10% or greater by weight? (265.1053(c))	DAE	___ [ ] NI N/A
13. Each barrier system equipped w/ a sensor to detect failure of the seal/barrier fluid system? (265.1053(d))	DAE	[ ] ___ NI N/A
14. Is each barrier system sensor checked: (265.1053(e)(1))		
a) Daily?	DAE	[ ] ___ NI N/A
OR		
b) Equipped with audible alarm that is checked monthly to see if working?	DAE	[ ] ___ NI N/A
UNLESS		
c) The compressor is located at an unmanned plant then is the sensor checked daily?	DAE	[ ] ___ NI N/A
15. Has the owner/operator determined a criterion to indicate failure of the seal/barrier fluid system? (265.1053(e)(2))	DAE	[ ] ___ NI N/A
16. Did the sensor indicates failure of the seal/barrier fluid system? If yes, a leak is detected and: (265.1053(f))	DAE	___ ___ NI N/A
a) Was it repaired as soon as practicable but no later than 15 calendar days after detected? (265.1052(g)(1))	DAE	[ ] ___ NI N/A

		YES	NO	NI	N/A
b) Was a first attempt at repair was made no later than 5 calendar days after leak is detected? (265.1052(g)(2))	DAE	[ ]	___	NI	N/A

Flanges connection

STANDARDS: PRESSURE RELIEF DEVICES IN GAS/VAPOR SERVICE (40 CFR 265.1054)

NOTE: Delays in repair are allowed see 265.1059 (#37)

17. Is the pressure relief device equipped with a closed-vent system capable of capturing and transporting leakage to a control devices specified in 265.1060? If yes, the device is exempt from relief device monitored for no detectable emissions (#18), specifications to reset device and time frame (#19 & #20). (265.1054(c))	DAE		X	NI	N/A
18. Pressure relief devices in gas/vapor service operated w/ no detectable emissions indicated by an instrument reading of <500 ppm above background, except during pressure releases? (265.1054(a)) No Record	DAE	[ ]	___	NI	N/A
19. After a pressure release, was the device returned to a condition of no detectable emissions indicated by an instrument reading of <500 ppm above background, as soon as practical but no later than 5 calendar days? (265.1054(b)(1))	DAE	[ ]	___	NI	N/A
20. No later than 5 calendar days after a pressure release, is the pressure relief device monitored to confirm no detectable emissions indicated by an instrument reading of <500 ppm above background,? (265.1054(b)(2))	DAE	[ ]	___	NI	N/A

Unknown

STANDARDS: SAMPLING CONNECTING SYSTEMS (40 CFR 265.1055)

21. Is the sampling system *in situ*? If yes, the system isn't required to have closed-vent or closed-purge system (#22 & #23). (265.1055(c))	DAE	BW	___	NI	N/A
22. Is each sampling connection system equipped with a closed-purge system or closed-vent system? (265.1055(a))	DAE	[ ]	___	NI	N/A
23. Does each closed-purge or closed-vent system: (265.1055(b))					
a) Return purged hazardous waste stream directly to hazardous waste management process line w/ no detectable emissions? (265.1055(b)(1))	DAE	[ ]	___	NI	N/A

OR

b) Collect and recycle the purged hazardous waste stream with no detectable emissions? (265.1055(b)(2))	DAE	[ ]	___	NI	N/A

OR

c) Designed/operated to capture/transport all purged hazardous waste stream to a control device? (265.1055(b)(3))	DAE	[ ]	___	NI	N/A

STANDARDS: OPEN-ENDED VALVES OR LINES (40 CFR 265.1056)

Note: Delays in repair are allowed see 265.1059 (#37)
Note: Did the owner/operator subject to the provisions of this subpart comply with the required test methods and procedures: (265.1063(b-I)) (#41)

24. Is each open-ended valve or line equipped with a cap, blind flange, plug or second valve? (265.1056(a)(1))	DAE	[X]	___	NI	N/A
25. Cap/blind flange/plug/second valve always seal open end except when waste must flow through? (265.1056(a)(2))	DAE	[X]	___	NI	N/A
26. If using a second valve, is the first valve closed before the second? (265.1056(b))	DAE	[X]	___	NI	N/A
27. If a double block and bleed system is used and the bleed line/valve stays open during venting, is the line between the block valves have cap/blind flange/plug/second value and sealed at all other times? (265.1056(c))	DAE	[ ]	___	NI	N/A

STANDARDS: VALVES IN GAS/VAPOR SERVICE OR IN LIGHT LIQUID SERVICE (40 CFR 265.1057)

Note: There are alternate standards for valves in gas/vapor or light liquid service where owners/operators may elect to have all valves within a hazardous waste management unit comply with alternative standards which: (1) allows no greater than 2% of the valves to leak. (265.1061(a-d) and (2) allows for skip period leak detection and repair. (265.1062(a-b))
Note: Delays in repair are allowed see 265.1059 (#37)

28. Valve designated as an unsafe-to-monitor valve as described in 265.1064(h)(1). If yes, the valve is exempt from monthly monitoring (#31) if: (265.1057(g))	DAE		X	NI	N/A
a) The owner/operator of the valve determines that the valve would be unsafe to monitor because monitoring personnel would be exposed to an immediate danger. (265.1057(g)(1))	DAE	[ ]	___	NI	N/A

		YES NO NI N/A
b) The owner/operator of the valve adheres to a written plan that requires monitoring of the valve as often as possible during safe-to-monitor times. (265.1057(g)(2))	DAE	[ ] ___ NI N/A
29. Valve designated as a difficult to-monitor valve in 265.1064(h)(2). If yes, the valve is exempt from monthly monitoring (#31) if: (265.1057(h))	DAE	___ X NI N/A
a) The owner/operator of the valve determines the valve cannot be monitored without elevating personnel more than 2 meters above a support surface. (265.1057(h)(1))	DAE	[ ] ___ NI N/A
b) Hazardous waste management unit where valve is located was in operation before 6/21/90. (265.1057(h)(2))	DAE	[ ] ___ NI N/A
c) Follow written plan that requires monitoring of valve at least once per calendar year. (265.1057(h)(3))	DAE	[ ] ___ NI N/A
30. Valve designated for no detectable emissions, as indicated bt instrument reading of <500 ppm above background, and described in 265.1064(g)(2) . If yes, the valve is exempt from monthly monitoring (#31) if: (265.1057(f))	DAE	___ X NI N/A
a) It has no external actuating mechanism in contact with the hazardous waste streams. (265.1057(f)(1))	DAE	[ ] ___ NI N/A
b) It is operated with emissions <500 ppm above background. (265.1057(f)(2))	DAE	[ ] ___ NI N/A
c) It is tested for emissions initially and then annually. (265.1057(f)(3))	DAE	[ ] ___ NI N/A
31. Is each valve, other than unsafe or difficult-to-monitor or no detectible emissions (#28-30), in gas/vapor or light liquid service monitored monthly for leaks? (265.1057(a)) (exemptions 33 & 34)	DAE	[ ] X NI N/A

OR

32. Any valve for which a leak has not been detected for two successive months may be monitored the first month of every succeeding quarter, until a leak is detected? (265.1057(c)(1))	DAE	X ___ NI N/A

AND

33. If the monitoring was every quarter and a leak is detected was the monthly monitoring resumed until a leak was not detected for 2 consecutive months? (265.1057(c)(2))	DAE	[ ] ___ NI N/A
34. When a leak is detected, by an instrument reading of 10,000 ppm or greater: (265.1057(b)): (265.1057(d)(1))		
a) Was it repaired as soon as practicable but not later than 15 calendar days after detected? (265.1052(d)(1))	DAE	[ ] ___ NI N/A
b) Was a first attempt at repair made no later than 5 calendar days after leak is detected? (265.1052(d)(2))	DAE	[ ] ___ NI N/A
c) Was the first repair attempt include, but not limited to: (265.1057(e))		
I) Tightening of bonnet bolts?	DAE	[ ] ___ NI N/A
ii) Replacement of bonnet bolts?	DAE	[ ] ___ NI N/A
iii) Tightening of packing gland nuts?	DAE	[ ] ___ NI N/A
iv) Injection of lubricant into lubricating packing?	DAE	[ ] ___ NI N/A

STANDARDS: PUMPS AND VALVES IN HEAVY LIQUID SERVICE, PRESSURE RELIEF DEVICES IN LIGHT LIQUID OR HEAVY LIQUID SERVICE AND FLANGES AND OTHER CONNECTORS (40 CFR 265.1058)

NOTE: Delays in repair are allowed see 265.1059 (#37)

35. Are pumps and valves in heavy liquid service, pressure relief devices in light or heavy liquid service and flanges and other connectors monitored within 5 days if evidence of a potential leak is found by visual, audible, olfactory or other detection method? (265.1058)(a))	DAE	No leaks [ ] ___ NI N/A
36. If a leak was detected, by an instrument reading of 10,000 ppm or greater: (265.1058(b))	DAE	___ X NI N/A
a) Was it repaired as soon as practicable but no later than 15 calendar days after detected? (265.1058(c)(1))	DAE	[ ] ___ NI N/A
b) Was a first attempt at repair was made no later than 5 calendar days after leak is detected? (265.1058(c)(2))	DAE	[ ] ___ NI N/A
c) Was the first repair attempt include, but not limited to: (265.1058(d))		
I) Tightening of bonnet bolts?	DAE	[ ] ___ NI N/A

		YES NO NI N/A
ii) Replacement of bonnet bolts?	DAE	[ ] ___ NI (N/A)
iii) Tightening of packing gland nuts?	DAE	[ ] ___ NI N/A
iv) Injection of lubricant into lubricating packing?	DAE	[ ] ___ NI N/A

STANDARDS: DELAY OF REPAIR (40 CFR 265.1059)

37. Was there a delay in repair of equipment for which leaks have been detected? If yes, the delay is allowed if:	DAE	___ ___ NI N/A
a) Was the repair technically infeasible without a shutdown of the hazardous waste management unit and did the repair occur before the end of the next shutdown? (265.1059(a))	DAE	[ ] ___ NI N/A
b) Was the equipment isolated from the hazardous waste management unit and the unit does not contain or contact hazardous waste with organic concentrations at least 10% by weight. (265.1059(b))	DAE	[ ] ___ NI N/A
38. Was there a delay in repair of a valve? If yes, the delay is allowed if:	DAE	___ ___ NI N/A
a) Determine emissions from purged material from immediate repair are greater than emissions resulting from a delay of the repair. (265.1059(c)(1))		[ ] ___ NI N/A
b) When repaired, the purged material is collected and destroyed or recovered in a control device. (265.1059(c)(2))	DAE	[ ] ___ NI N/A
39. Was there a delay in repair of a pump? If yes, the delay will be allowed if:	DAE	___ ___ NI N/A
a) Repair requires the use of a duel mechanical seal system that includes a barrier fluid system. (265.1059(d)(1))	DAE	[ ] ___ NI N/A
b) Repair is completed as soon as practicable but within 6 months. (265.1059(d)(2))	DAE	[ ] ___ NI N/A
40. Was there a delay in repair of a valve beyond a hazardous waste management unit shutdown? If yes, the delay will be allowed until the next shutdown or longer if the shutdown is within 6 months if: (265.1059(e))	DAE	___ ___ NI N/A
a) The valve assembly replacement is necessary during shutdown.	DAE	[ ] ___ NI N/A
b) Valve assembly supplies have been depleted & supplies were sufficiently stocked before supplies were depleted.	DAE	[ ] ___ NI N/A

TEST METHODS AND PROCEDURES (40 CFR 265.1063)

41. Did the owner/operator subject to the provisions of this subpart comply with the required test methods and procedures: (265.1063(b-I))		
a) For leak detection monitoring? (265.1063(b))	DAE	[X] ___ NI N/A
b) For 'no detectible' emissions determination? (265.1063(c))	DAE	[ ] ___ NI (N/A)
c) To determine if each piece of equipment contains or contacts a hazardous waste w/ organic concentrations ≥ 10% by weight? (265.1063(d))	DAE	[X] ___ NI N/A
d) To determine if pumps or valves are in light liquid service? (265.1063(h))	DAE	[X] ___ NI N/A
e) To determine if the control device achieved 95 weight percent organic emissions? (265.1063(I))	DAE	[ ] ___ NI (N/A)
42. Were samples used in determine the percent organic content representative of the highest TOC hazardous waste that is expected to be contained in or contact the equipment? (265.1063(g))	DAE	[ ] [X] NI N/A

RECORDKEEPING REQUIREMENTS (40 CFR 265.1064)

Note: Owners/operators with more than one hazardous waste management unit, subject to these regulations, may use one recordkeeping system if each unit is identified.

42. Did the owners/operators record the following information in the operating record for each piece of equipment subject to Subpart BB? (265.1064(b))		
a) Equipment identification number and hazardous waste management unit identification? (265.1064(b)(1)(I))	DAE	[X] ___ NI N/A
b) Approx. location(s) of the equipment (e.g., identify unit on facility plot plan)? (265.1064(b)(1)(ii))	DAE	[ ] ___ (NI) N/A

Not observed

		YES	NO	NI	N/A
c) Type of equipment (eg: pump or pipeline valve)? (265.1064(b)(1)(iii))	DAE	[X]		NI	N/A
d) Percent-by-weight total organics in the hazardous waste stream at the equipment? (265.1064(b)(1)(iv))	DAE	[X]		NI	N/A
e) State of the hazardous waste at the equipment (eg: liquid or gas/vapor)? (265.1064(b)(1)(v))	DAE	[X]		NI	N/A
f) Method of compliance w/ the standard (monthly leak detection/repair or equipped w/ dual mechanical seals?	DAE	[ ]	X	NI	N/A
g) Implementation schedule, if facility can't install a closed-vent system & control device in time?(265.1064(b)(2))	DAE	[ ]		NI	N/A
h) A performance test plan if the owner/operator chose to use test data to demonstrate the organic removal efficiency or total organic compound concentration by the control device? (265.1064(b)(3))	DAE	[ ]		NI	N/A
I) Include documentation of compliance with the closed-vent and control device standards? (265.1064(b)(4))	DAE	[ ]		NI	N/A
j) If a leak is detected?					
I) A weatherproof & readily visible identification attached to the leaking equipment and marked with: (265.1064(c)(1))					
a) The equipment i.d. number?	DAE	[ ]		NI	N/A
b) Date evidence of a potential leak was found?	DAE	[ ]		NI	N/A
c) Date leak was detected?	DAE	[ ]		NI	N/A

Note: The identification on equipment, except a valve, may be removed after repair. (265.1064(c)(2))
Note: The identification on a valve may be removed after being monitored for two successive months without leaks. (265.1064(c)(3))

ii) In an inspection log the following information? (265.1064(d))		X			
a) Instrument, operator and equipment id number? (265.1064(d)(1))	DAE	[X]		NI	N/A
b) Date evidence of a potential leak was found? (265.1064(d)(2))	DAE	[X]		NI	N/A
c) Date leak was detected? (265.1064(d)(3))	DAE	[ ]		NI	N/A
d) Date of each attempt to repair the leak? (265.1064(d)(3))	DAE	[ ]		NI	N/A
e) Repair methods applied in each attempt to repair the leak? (265.1064(d)(4))	DAE	[ ]		NI	N/A
f) "Above 10,000" instrument readings? (265.1064(d)(5))	DAE	[ ]		NI	N/A
g) "Repair delayed" and the reason? (265.1064(d)(6))	DAE	[ ]		NI	N/A
h) Documentation supporting delay in valve repair? (265.1064(d)(7))	DAE	[ ]		NI	N/A
I) Signature of owner/operator whose decision it was not to repair until shutdown? (265.1064(d)(8))	DAE	[ ]		NI	N/A
j) If the repair is not done in 15 days the expected date of a successful repair? (265.1064(d)(9))	DAE	[ ]		NI	N/A
k) The date of successful repair of the leak? (265.1064(d)(10)	DAE	[ ]		NI	N/A
iii) Up-to-date design documentation, monitoring, operating, inspection information for closed-vent & control devices? (265.1064(e))	DAE	[ ]		NI	N/A
iv) Control device (other than thermal or catalytic vapor incinerator/flare/boiler/process heater/condenser/carbon adsorption system) have monitoring/inspection information indicating proper operation/maintenance of control device? (265.1064(f))	DAE	[ ]		NI	N/A
v) The following information regarding the equipment recorded in a log: (265.1064(g))					
a) List of identification numbers for the equipment subject to the requirements and equipment designated for no detectable emissions? (265.164(g)(1)&(2)(I)) — No designation made	DAE	[X]		NI	N/A
b) The designation of the equipment signed by the owner/operator? (265.1064(g)(2)(ii))	DAE	[ ]		NI	N/A
c) List of identification numbers for pressure relief devices? (265.1064(g)(3))	DAE	[X]		NI	N/A
d) For each compliance test: — No records observed					
1) Dates of each test? (265.1064(g)(4)(I))	DAE	[ ]		NI	N/A
2) Background level measured during each test? (265.1064(g)(4)(ii))	DAE	[ ]		NI	N/A

		YES NO NI N/A
3) The maximum instrument reading measured at the equipment during each test? (265.1064(g)(4)(iii))	DAE	[ ] ___ NI N/A
e) List of all identification numbers for equipment in vacuum service? (265.1064(g)(5))	DAE	[ ] ___ NI N/A
vi) A log with a list of identification numbers for the valves that are designated unsafe or difficult to monitor, an explanation stating why they are unsafe or difficult and the plan for monitoring? (265.1064(h)(1-2))	DAE	[ ] ___ NI N/A
vii) For valves in gas/vapor or light liquid service with alternative standards the operating record will record: (265.1064(I))		
a) A schedule of monitoring? (265.1064(I)(1))	DAE	[X] ___ NI N/A
b) The percent of valves found leaking during each monitoring period? (265.1064(I)(2)) $< 2\%$	DAE	[X] ___ NI N/A
viii) Is the following information shall be recorded in a log and kept in the operating record: (265.1064(j))		
a) Criteria for failure of seal system indicated by sensor used w/ light liquid service pumps? (265.1064(j)(1))	DAE	[ ] ___ NI N/A
b) Criteria for failure of seal system indicated by sensor used w/ compressors? (265.1064(j)(1))	DAE	[ ] ___ NI N/A
c) Any changes to these criteria and the reason for change? (265.1064(j)(2))	DAE	[ ] ___ NI N/A
ix) The following information kept in a log and used to determine exemptions for the hazardous waste management unit: (265.1064(k))		
a) An analysis determining the design capacity of the management unit? (265.1064(k))	DAE	[ ] ___ NI N/A
b) A statement listing the hazardous waste influent to and effluent from each unit and analysis determining whether the waste is a heavy liquid? (265.1064(k)(2))	DAE	[ ] ___ NI N/A
c) Up-to-date analysis/supporting data used to determine if equipment is subject to standards? (265.1064(k)(3))	DAE	[ ] ___ NI N/A
d) Documentation when knowledge of the hazardous waste stream or process is used? (265.1064(k)(3))	DAE	[ ] ___ NI N/A
e) Any new determinations if the owner/operator takes any action that could result in an increase of the organic content of the waste? (265.1064(k)(3))	DAE	[ ] ___ NI N/A
43. Are records of equipment leak information in 265.1064(d) and closed-vent and control device information in 265.1064(e) kept 3 years? (265.1064(1))	DAE	[ ] ___ NI N/A

Comments:

Honeywell Burdick & Jackson
7/19/16 MIN072575731

Inspection Checklist for Subpart CC: Air Emission Standards (Tanks)

Applicability: The air emission requirements apply to units subject to Subpart J * unless any of the following apply:

Item # 40 CFR: *Note: CESQG's and SQG's are exempt

CC-T1	265. 1	Do any of the following general exclusions apply? If yes, please circle.	YES	NO

1. Wastewater treatment units -265.1(c)(10)
2. Emergency spill management units. -265.1(c)(11)
3. Hazardous waste recycling units. -265.1(c)(6)
4. Elementary neutralization units -265.1(c)(10)
5. Totally enclosed treatment units. -265.1(c)(9)
6. Satellite accumulation areas. -265.1(c)(7) - 262.34(c)(1)

CC-T2	265.1080	Do any of the following exceptions apply? If yes, please circle.	YES	NO

1. Waste was placed in the unit prior to Oct. 6, 1996 and none has been added since. -265.1080(b)(1)
2. The unit has stopped adding waste and is undergoing closure pursuant to an approved closure plan. -265.1080(b)(3)
3. The unit is used solely for onsite treatment or storage as a result of remedial activities required under corrective action, Superfund, or other similar state program. -265.1080(b)(5)
4. The unit is used solely to manage radioactive mixed waste. -265.1080(b)(6)
5. The unit operates with an emission control device regulated by and in accordance with Clean Air Act regulations. -(b)(7)
6. The unit operates with a process vent as defined in 264.1031, regulated under Subpart AA. -265.1080(b)(8)

CC-T3	265.1080(d)	Administrative Stay for Organic Peroxide Waste:	YES	NO

If the unit recieves hazardous waste generated by organic peroxide manufacture, and the owner/operator has met the conditions as set forth in 265.1080(d), the requirements under Subpart CC are administratively stayed, *except for the record keeping requirements* which additionally include the notification requirement as given in 265.1080(d)(3).

CC-T4	265.1083	Do any of the following exemptions apply? If yes, please circle.	YES	NO

General Standards: The owner/operator must control air emissions from waste management units except the unit is exempt if:

1. All hazardous waste entering the unit has an average VO concentration at the point of origination less than 500 parts per million by weight (waste determination required by 265.1084; see **CC-T5**). -265.1083(c)(1)
2. The organic content of all waste entering the unit has been reduced by one of the 8 acceptable processes. -265.1083(c)(2)
3. The unit is a tank used for certain biological treatment consistent with 265.1087(c)(2)(iv). -265.1083(c)(3)
4. The hazardous waste placed in the unit meets the LDR numerical concentration limits given in 268.40 or has been treated using the LDR treatment technology specific for the waste (specified in 268.42). -265.1083(c)(4)
5. The unit is a tank within an enclosure used for bulk feed to an incinerator and meets certain requirements. -265.1083(c)(5)

CC-T5	265.1084	Waste Determination	Determination Not Needed	Determination Needed

Was the VO concentration properly determined for each waste which the facility manages in a unit which does not meet Subpart CC requirements? The concentration must be determined by either direct measurement or knowledge. Please see 265.1084 for specific requirements for measurement and knowledge. Determination is **not** needed for waste managed in tanks which meet Subpart CC standards. It may be necessary to evaluate tank management prior to requiring VO concentration determination.

TANK MANAGEMENT

Level 1 tank controls apply only to a fixed-roof tank in which the maximum vapor pressure of organic waste is less than that listed below for each tank design capacity, contents are not heated above the temperature of vapor pressure determination, and no waste stabilization is conducted in the tank. -265.1085(b)(1)
Tanks that exceed Level 1 criteria must use Level 2 controls; tanks that do not exceed Level 1 criteria may use Level 2 controls. The five design options for Level 2 controls are given below; vented fixed-roof tanks are the most common. -265.1085(b)(2)

Tank Design Capacity	Level 1 pressure limits	Level 1	Level 2
≥151m³ / 40,000 gal	< 5.2 kPa / 0.75 psi	Fixed-roof tanks -265.1085(c)(1) through (c)(4) -265.1085(d)	Fixed-roof tanks vented to control device -265.1085(g) External floating roof tanks - 265.1085(f) Fixed-roof with internal floating roof - 265.1085(e) Enclosure vented to combustion device - 265.1085(i) Pressure tank - 265.1085(h)
< 151 m³ and ≥ 75 m³	< 27.6 kPa / 4.0 psi		
< 75 m³ / 20,000 gal	< 76.6 kPa / 11.1 psi		

265.1085(c)

Level 1 Controls for Fixed-Roof Tanks

NA=Not Applicable NI=Not Inspected OK= In Compliance DF= Deficiency

CC-T6	**265.1085(c)(1)**	**Vapor Pressure Determination**	**NA**	**NI**	**OK**	**DF**

Has the owner/operator determined the maximum organic vapor pressure of the waste in the tank: -265.1085(c)(1) by direct measurement or by knowledge? -265.1084(c)(3,4)	YES	(NO)
Is the determination acceptable?	YES	NO
Does waste in tank exceed vapor pressure threshold for tank size? (If yes must use Level 2 Controls)	YES	NO

Record Not Provid during CEI

CC-T7	**265.1085(c)(2)**	**Tank Design Specifications**	**NA**	**NI**	**OK**	**DF**

The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the hazardous waste in the tank; shall be installed such that ther are no visible cracks, holes, gaps or other open spaces between roof and tank wall / closure device and roof.
Inspect the fixed roof and closure devices of each tank or a representative percentage of multiple tanks; list and photograph defects at each.

Tank #	Defect(s)	Photo #	Notes

Is each opening in the fixed roof (sampling port, conservation vent, level indicator, safety valve, etc.): **265.1085(c)(2)(i)(A)** equipped with a closure device such that when closed there are no visible cracks, holes, gaps or other open spaces? or;	YES	NO
265.1085(c)(2)(i)(B) connected via a closed vent system to a control device? (If YES see Level 2 Controls checklist below)	YES	NO

CC -T8	**265.1085(j)**	**Waste transfer requirements**	**NA**	**NI**	**OK**	**DF**

Transfer of hazardous waste to the tank from another tank subject to 265.1085 or suface impoundment subject to 265.1086 shall be conducted using continuous hard piping or other closed system,to prevent exposure of waste to atmosphere; except under conditions given in 265.1085(j)(2).

CC-T9	**265.1085(c)(3)**	**Operating requirements**	**NA**	**NI**	**OK**	**DF**

Cover and closure devices shall be closed at all times except when performing routine inspections, sampling, maintenance and cleaning.
Opening of a pressure/vacuum relief valve, conservation vent or similar device is allowed during normal operations to maintain tank pressure within design specificatons. Opening of a safety device is allowed at any time.

Are pressure/vacuum relief valves and conservation vents designed to operate with NDE when secured in closed position?	YES	NO
Are the opening settings of these devices consistent with the manufacturer's recommended operating ranges?	YES	NO
What are the pressure settings of these devices and how do they compare with Level 1 vapor pressure limits?	OK	DF

According to Facility

CC-T10	265.1085(c)(4)	**Inspection requirements**	NA	NI	OK	DF

The fixed roof and closure devices shall be visually inspected for defects initially, on or before December 12, 1996, or when first in service and thereafter at least annually,according to written plan; except when unsafe, and delay conditions are met. Buried parts of tank need not be inspected
TSDs: The inspection plans must be incorporated into the overall facility inspection plan as per 265.15.

CC-T11	265.1085(k)	**Repair requirements**	NA	NI	OK	DF

Owner/operator shall make first efforts at repair of each defect detected during an inspection no later than 5 calendar days after detection; repairs shall be completed as soon as possible but no later than 45 calendar days after detection, except as provided in 265.1085(k)(2).

CC- T12	265.1090(b)	**Recordkeeping requirements**	NA	NI	OK	DF

For each unit in service records must be maintained on-site including: unique unit ID number, dimensions and capacity, organic vapor pressure of waste (if tested, records include time and date of samples, analytical method, and results), and inspection and repair records for three years.
Please list in detail below deficiencies noted regarding items CC-T6 through CC-T12:

CC- T13	265.1085(c)(2)	**Level 2 Controls for Fixed-Roof Tanks Vented to Control Device**	**NA=Not Applicable OK= In Compliance**		**NI=Not Inspected DF= Deficiency**	

All requirements of CC-T7 and: Each roof opening not equipped with a closure device shall be connected to a closed system that is vented to a control device which removes or destroys organics in the vent stream, and which shall be operating whenever hazardous waste is in the tank.

CC- T14	265.1085(j)	**Waste transfer requirements**	NA	NI	OK	DF

All requirements of CC-T8.

CC- T15	265.1085(g)	**Operating requirements**	NA	NI	OK	DF

All requirements of CC-T9 and: Closed vent system and control device shall be installed and operated in accordance with **265.1088**.

CC- T16	265.1085(g)(3)	**Inspection requirements**	NA	NI	OK	DF

All requirements of CC-T10 and: perform initial leak detection testing of closed vent system on or before date tank is subject to the rule, as per 265.1088(b)(4); annually inspect closed vent system components per 265.1033(k) and 265.1034(b); negative pressure systems per 265.1033(j)(2).

CC- T17	265.1085(k)	**Repair requirements**	NA	NI	OK	DF

All requirements of CC-T11.

CC- T18	265.1090(e)	**Recordkeeping requirements**	NA	NI	OK	DF

All requirements of CC-T12 and: maintain records of unexpected malfunctions and semiannual updates of planned maintenance operations for 3 years; also: If control device is <u>not</u> a carbon absorber, condenser, flare, process heater, boiler or thermal vapor incinerator, maintain records of proper operation and use (e.g., manufacturer's documentation). Please list in detail below deficiencies regarding items CC-T13 through CC-T18:

Appendix C

Documents received during the Inspection:

- Muskegon Site Overview: Process Flow
- Site Map
- Certificate of Compliance and Calibration for TVA-1000
- TVA-1000B Analyzer Daily Calibration Form
- Master RCRA Subpart BB Equipment Inventory
- Capacity/Asset Overview
- Sign-In Sheet for CEI Close-Out Meeting

Inspection Date:
July 19-20, 2016

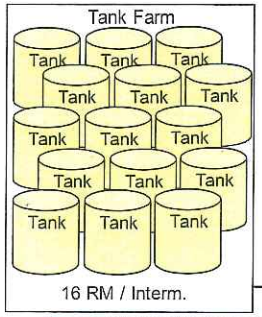
Facility Name and ID Number:
Honeywell Burdick & Jackson
EPA ID: MID072575731

Inspector:
Brenda Whitney
Compliance Section 2
RCRA Branch
Land and Chemicals Division

Muskegon Site Overview: Process Flow

Honeywell

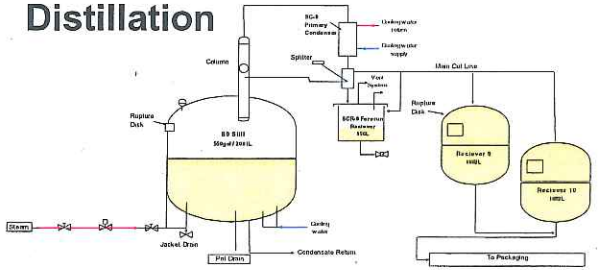
Raw Material Receiving & Storage



16 Bulk Tanks

Processing

Distillation



Direct packaging

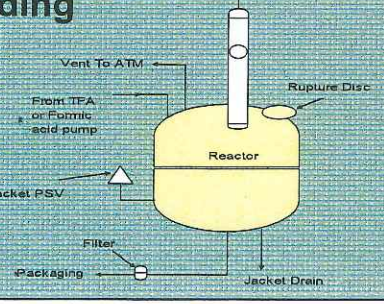
Vent To Venturi

Blending

Unload Drums

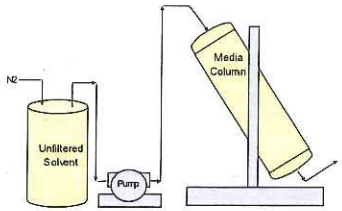
Drum Storage

Raw Matl. Sampling



Pre-pack Sampling

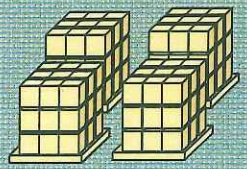
Filtration / Adsorption



Packaging

SSPDS, BICs, NowPak & Totes

Palletized Product



Intermediate Storage

Distribution

Overseas Shipments

Bulk Tanker

VWR Distribution Warehouses

Regional Distributers

Direct Ship to Customer

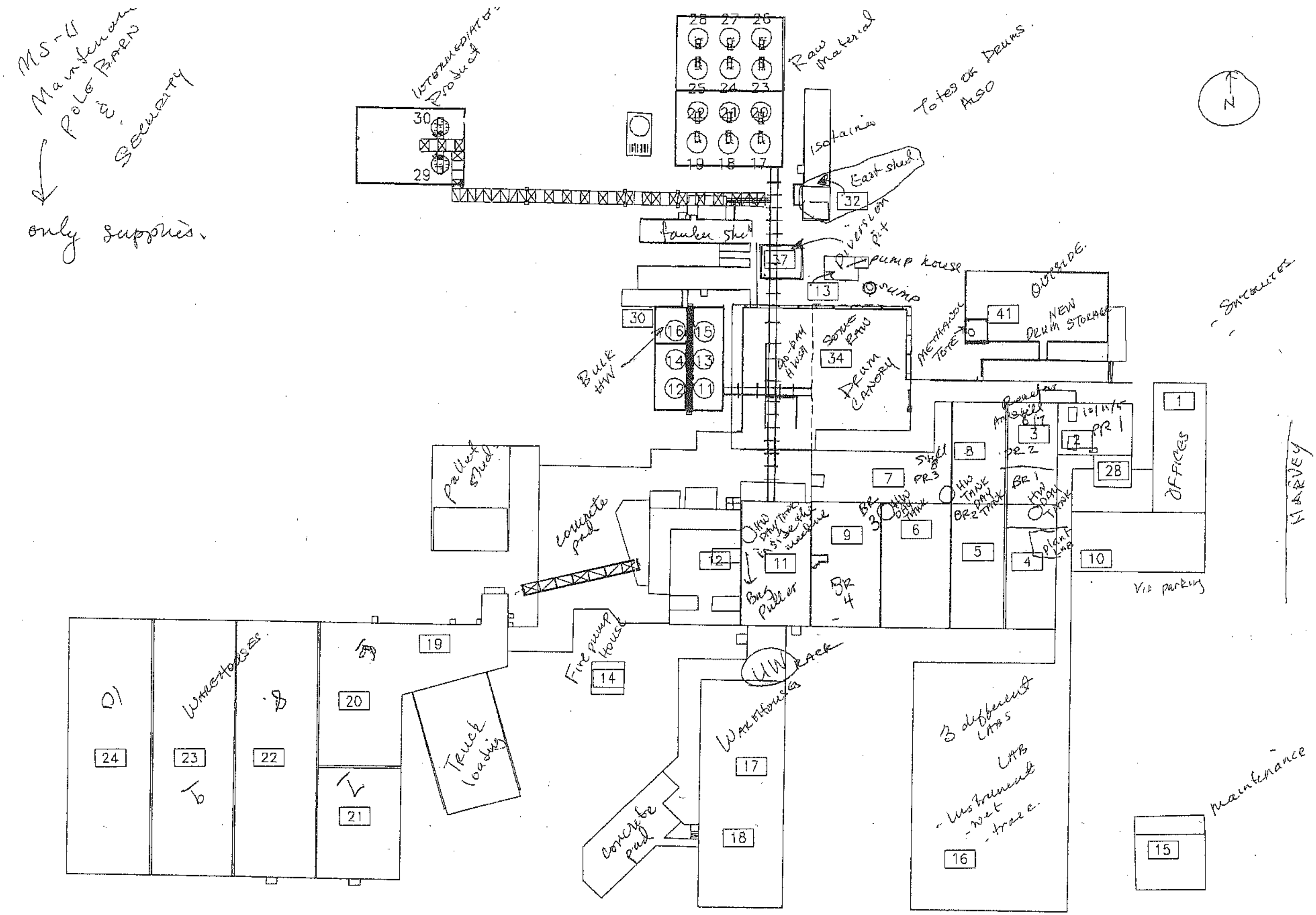
ups

FedEx.

e-commerce

Tanker / ISO

Raw Materials
Tech Grade Solvents


MS-II
Maintenance
Polo Paper
&
Security
only supplies.
Intermediate
Product
Raw material
Totes or Drums
Also
N
Isolation
East shed
Diversion pit
pump house
sump
Outside
New Drum Storage
Methanol Tote
Some Raw
Drum Canopy
Bulk HW
Offices
PR 1
PR 2
BR 1
BR 2
PR 3
BR 3
BR 4
HW Day Tank
Bag Puller
plant lab
Vis parking
HARVEY
pallet shed
concrete pad
Fire pump house
Warehouses
Truck loading
UW rack
Warehouse
3 different Labs
Lab
- Instrument
- wet
- trace
maintenance
Satellites
concrete pad
1
2
3
4
5
6
7
8
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ARGUS-HAZCO

Certificate of Compliance and Calibration

	Certificate Number	12/18/2015 - 2E+	
Order#	04071278	*Make/Model*	TVA-1000
Customer#	0315430	*Asset #*	0013546
Customer Name	HONEYWELL INTERNA	*Serial Number*	8810682

Sensor Installed	*Standard*	*Lot Number*	*Cal Set Point*	*Final Span*
CH4	PPM	045215	500	500
ISOBUTYLEN	PPM	122-124511416-1	100	100

Notes

Location	Detroit, MI	*Asset Released In Tolerance*	☑
Technician	C.HANDLON	*All Tests Passed*	☑
Date	12/18/2015		
Time	15:47		
SOP#			

Quality Control: [signature] **Date:** 12/22/15

Please Note: All tests performed with NIST Traceable Master Gas at ambient room temperature, humidity, and pressure at the location listed above. Time in transit or any change in temperature, pressure, humidity, or elevation may result in changes to the calibration values listed. Performance of a bump test is recommended prior to each use; refer to owners manual for bump testing and calibration procedures. Use of this test sheet constitutes proof that the testing environment was within manufacturers' limitation and the instrument conforms to manufacturers' specification. For a copy of the calibration standard certificate of analysis or MSDS, contact us at 800-332-0435.

TVA-1000B ANALYZER DAILY CALIBRATION FORM

Operator :

- [ ] B. Brenton
- [ ] J. Hamann
- [x] S. Cook

Date : _____

Time : _____

Calibrated at:

- [X] Honeywell, Burdick & Jackson office
- [ ] Other _____

Analyzer Model : **TVA-1000**

Analyzer Serial Number : **8810682**

Last Performance Test : **12/18/2015**

Next Performance Test : _____

Monitoring Event(s):

- [x] RCRA Subpart BB monthly or quarterly
- [ ] Confirmation of leak repair
- [ ] Honeywell Voluntary

Check Box if Investigated and Acceptable :

Battery Adequately Charged	x
Sufficient Hydrogen Supply	x
Probe Filter Condition Good	x
Zero Gas Check Good	x
Sample System Condition Good	x
Flame Arrestor Present	x
Qualitative Leak Check Passed	x

Calibration Gas Mixture : **100 ppm Methane in Air**

Cylinder Number: ####

Calibration Gas Concentration (ppm)	Calibration Gas Expiration Date	Initial Measured Concentration (pm)	Final Measured Calibration (ppm)	Final Calibration Drift[1] (%)
100	11/14/2016	15,151	14,152	6.50

[1] Calibration Drift = $\frac{[(\text{Initial Measured Concentration}) - (\text{Final Measured Concentration})]}{(\text{Initial Measured Concentration})} \cdot 100$

Master RCRA Subpart BB Equipment Inventory – Honeywell - Burdick Jackson, Muskegon, MI

(Hazardous Waste Management Un[illegible] J-Day Hazardous Waste AST)

ID NUMBER	EQUIPMENT LOCATION	EQUIPMENT TYPE	% TOTAL ORGANICS	WASTE STATE	DATE OF COMPLIANCE TEST	METHOD OF COMPLIANCE	BACKGROUND LEVEL (ppm)	MAXIMUM READING (ppm)	COMMENTS
T16 - C14	(Top of Tank)Tank Pipe 1140	Flanged Connection	95%	Liquid		LDAR/ Method 21	1.3	1.33	
T16 - C15	(Top of Tank)Waste Inlet	Flanged Connection	95%	Liquid	n/a	LDAR/ Method 21	n/a	n/a	removed 9-14
T16 - C17	Tank Waste Inlet 1140	Flanged Connection	95%	Liquid	n/a	LDAR/ Method 21	n/a	n/a	removed 9-14
T16 - C12	Tank Recirc. Pipe 1143	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.4	
T16 - C13	Tank Recirc. Pipe 1143	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.32	
T16 - C16	Tank Pipe 1140	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.41	
T16 - C24	Inlet Pipe Run 1140	Flanged Connection	95%	Liquid	n/a	LDAR/ Method 21	n/a	n/a	removed 9-14
T16 - C22	Inlet Pipe Run 1140	Flanged Connection	95%	Liquid	n/a	LDAR/ Method 21	n/a	n/a	removed 9-14
T16 - C8	(Top of Tank)Sensor 2	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.5	
T16 - C19	Tank Pump Pipe	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.35	
T16-C10	Rupture Disc	Flanged Connection	195%	Liquid		LDAR/ Method 22		1.35	
T16 - C4	Tank Flame Arrestor	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.36	
T16 - C6	Tank Flame Arrestor	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.5	

Master RCRA Subpart BB Equipment Inventory — Honeywell - Burdick Jackson, Muskegon, MI

(Hazardous Waste Management Un. -Day Hazardous Waste AST)

ID NUMBER	EQUIPMENT LOCATION	EQUIPMENT TYPE	% TOTAL ORGANICS	WASTE STATE	DATE OF COMPLIANCE TEST	METHOD OF COMPLIANCE	BACKGROUND LEVEL (ppm)	MAXIMUM READING (ppm)	COMMENTS
T16 - V13	Canopy Drum Pump Drain Valve	Ball Valve	95%	Liquid		LDAR/ Method 21	0.88	0.87	
T16-C11	Canopy Strainer Pot	Flanged Connection	95%	Liquid	n/a	LDAR/ Method 21	n/a	0.89	removed 9-14
T16 - V1	Tank 1146	Ball Valve	95%	Liquid		LDAR/ Method 21		0.89	
T16 - V2	Tank	Ball Valve	95%	Liquid		LDAR/ Method 21		1.1	
T16 - V11	Tank Low Point Drain	Ball Valve	95%	Liquid		LDAR/ Method 21		1.03	
T16 - V4	Pipe Run 1143	Ball Valve	95%	Liquid		LDAR/ Method 21		1.02	
T16 - V5	Pipe Run 1143	Ball Valve	95%	Liquid		LDAR/ Method 21		1.01	
T16 - V6	Pipe Run 1143	Ball Valve	95%	Liquid		LDAR/ Method 21		0.98	
T16 - V7	Pipe Run 1143	Ball Valve	95%	Liquid		LDAR/ Method 21		0.98	
T16 - V9	Pipe Run 1141	Ball Valve	95%	Liquid	n/a	LDAR/ Method 21	n/a	n/a	removed 9-14
T16 - V21	Pipe Run 1141	Solenoid valve	95%	Liquid		LDAR/ Method 21		1.1	
T16 - V10	Tank Pipe 1141	Ball Valve	95%	Liquid		LDAR/ Method 21		1.09	
T16-V15	Canopy Strainer Pot Pressure Guage	Ball Valve	95%	Liquid	n/a	LDAR/ Method 21	n/a	n/a	removed 9-14

Master RCRA Subpart BB Equipment Inventory – Honeywell - Burdick Jackson, Muskegon, MI

(Hazardous Waste Management Unit – 90-Day Hazardous Waste AST)

ID NUMBER	EQUIPMENT LOCATION	EQUIPMENT TYPE	% TOTAL ORGANICS	WASTE STATE	DATE OF COMPLIANCE TEST	METHOD OF COMPLIANCE	BACKGROUND LEVEL (ppm)	MAXIMUM READING (ppm)	COMMENTS
BR3 - V31	Nitrogen Vent	Ball Valve	95%	Liquid		LDAR/ Method 21	1.21	1.23	
BR3- C29	Drain Pan bottom flange ELF 1	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.33	
BR3- V36	Drain Pan valve ELF 1	Ball Valve	95%	Liquid		LDAR/ Method 21		1.21	
BR3-C28	Waste Tank Inlet ELF 1	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.21	
BR3-V32	Waste Tank Sight Glass (Bottom) ELF1	Ball Valve	95%	Liquid		LDAR/ Method 21		1.25	
BR3-V33	Waste Tank Sight Glass (Top) ELF1	Ball Valve	95%	Liquid		LDAR/ Method 21		1.21	
BR3-C30	Waste Tank Discharge End Cap (MT Port 2) ELF1	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.3	
BR3-V34	Waste Tank Discharge Valve ELF2	Ball Valve	95%	Liquid		LDAR/ Method 21		1.27	
BR3-C31	Waste Tank Sant Connection ELF1	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.3	
BR3-C32	Waste Tank Vent ELF 1	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.23	
BR3-C33	Waste Tank Rup Disk ELF 1	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.4	
BR3-C34	Waste Tank MT Port 1 ELF 1	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.3	
BR3-C35	Drain Pan ELF 2	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.3	

Master RCRA Subpart BB Equipment Inventory – Honeywell - Burdick Jackson, Muskegon, MI

(Hazardous Waste Management Un... -Day Hazardous Waste AST)

ID NUMBER	EQUIPMENT LOCATION	EQUIPMENT TYPE	% TOTAL ORGANICS	WASTE STATE	DATE OF COMPLIANCE TEST	METHOD OF COMPLIANCE	BACKGROUND LEVEL (ppm)	MAXIMUM READING (ppm)	COMMENTS
BR1 - C46	Waste Tank Rup Disk BR 1	Flanged Connection	95%	Liquid		LDAR/ Method 21		0.95	
BR1 - V40	Vent Valve	Ball Valve	95%	Liquid		LDAR/ Method 21		0.98	
BR2 - C48	Waste Tank Vent BR 2	Flanged Connection	95%	Liquid		LDAR/ Method 21	1.03	1.09	
BR2-V40	Waste Tank Sight Glass (Top) BR 2	Ball Valve	95%	Liquid		LDAR/ Method 21		1.09	
BR2-V41	Waste Tank Sight Glass (Bottom) BR 2	Ball Valve	95%	Liquid		LDAR/ Method 21		1.11	
BR2-V42	Waste Tank Discharge Valve BR 2	Ball Valve	95%	Liquid		LDAR/ Method 21		1.08	
BR2-C54	Waste Tank Drain End Cap BR 2	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.12	
BR2 -C55	Waste Tank Blank 2" Sanitary Fitting	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.08	
BR2 -C56	Waste Tank Level Sensor Sanitary Fitting	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.08	
BR2 -C52	Waste Tank Hood Drain Sanitary Fitting	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.1	
BR2-C53		Flanged Connection	95%	Liquid		LDAR/ Method 21		1.1	
BR2-V43	Waste Tank Hood Drain Valve	Ball Valve	95%	Liquid		LDAR/ Method 21		1.2	
BR2-V44	Waste Tank N2 valve	Ball Valve	95%	Liquid		LDAR/ Method 21		1.2	

Master RCRA Subpart BB Equipment Inventory – Honeywell - Burdick Jackson, Muskegon, MI

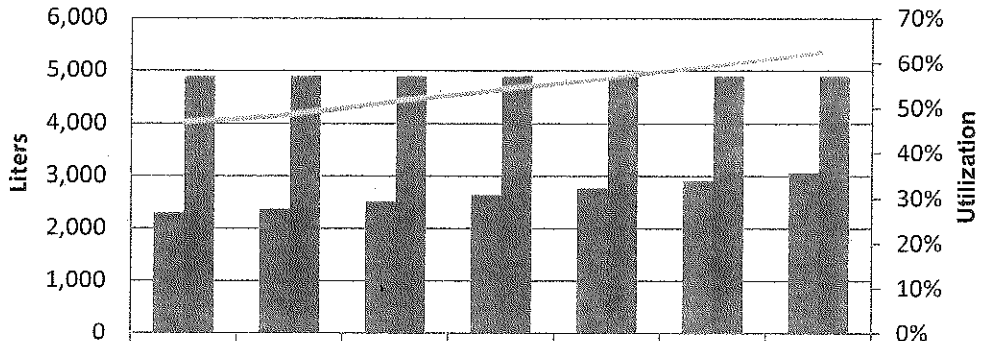
(Hazardous Waste Management Un. ...-Day Hazardous Waste AST)

ID NUMBER	EQUIPMENT LOCATION	EQUIPMENT TYPE	% TOTAL ORGANICS	WASTE STATE	DATE OF COMPLIANCE TEST	METHOD OF COMPLIANCE	BACKGROUND LEVEL (ppm)	MAXIMUM READING (ppm)	COMMENTS
BR3-C51	Waste Drain Line Connection (0.75-P-1430-TS)	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.9	
BR3-C52	Waste Drain Line Connection (0.75-P-1430-TS)	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.86	
BR3-C53	Waste Drain Line Connection (0.75-P-1430-TS)	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.77	
BR3-C54	Waste Drain Line Connection (0.75-P-1430-TS)	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.72	
BR3-C55	Waste Drain Line Connection (0.75-P-1430-TS)	Flanged Connection	95%	Liquid		LDAR/ Method 21		1.73	
	Waste Drain Line Valve		95%	Liquid					
	Waste Drain Line Valve		95%	Liquid					

Capacity / Asset overview

Honeywell

Muskegon Distillation



	2013	2014	2015	2016	2017	2018	2019
Demand	2,300	2,380	2,524	2,650	2,783	2,922	3,068
HON Capacity	4,898	4,898	4,898	4,898	4,898	4,898	4,898
Capacity Utilization	47%	49%	52%	54%	57%	60%	63%

Plant Operations

- 3 shift / 5 day /24hrs operation
- Production
- Packaging
- Quality Assurance
- Maintenance
- Administrative
- Product Mktg / R&D

Production – HC 15

Distillation
- 10 stills
- 22 receivers

Reactions
- 7 reactors

Blends
- 2 blending units

Filtration
- 4 columns

Bulk Storage
- 17 raw material tanks
- 2 intermediate

Packaging – HC 19

- BR1 Manual packaging
- BR2 Manual packaging
- BR3 Semi automated
- BR4 Manual packaging - Clean room
- BR5 Manual packaging High Purity Water

Warehouse / Shipping – HC 11

- 1 packaging warehouse
- 5 Finished product warehouses
- 3 Shipping docks
- 2 Receiving docks

QA Lab – HC 5
- GC/LC & GC/LC MS
- ICP MS
- UC/FTIR
- Particle Size
- Wet Chemistry

Name	Title
Margaret Ribuld Hargadon	H&E Leader
Doug Diesselberg	Plant Manager
Jeff Halvorson	Maintenance & Engineering Leader
John Hamandi	NSE Specialist
Bob Benton	PMT Environmental COE Leader
Mary Morse	Production Area Leader
Larry Hysell	Operations Leader
David Mills	QA/QC Leader
Alexandrea Thomson	Human Resource Leader
Wade O'Boyle	MI-DEQ
Brenda Whitney	US EPA